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ABSTRACT

This document contains 12 modules: 4 on business analysis and 8 on business computer applications. The business analysis modules are as follows: (1) the framework of business; (2) universal activities of business; (3) selected business subsystems; and (4) your place in business. Computer applications modules are on the following topics: (1) business operations overview; (2) computer systems and applications; (3) business word processing applications; (4) business database applications; (5) business spreadsheet applications; (6) business graphics applications; (7) interrelated applications; and (8) the computer, society, and the individual. Each module includes the number of weeks and hours required, key concepts, content outline, performance objectives/supporting competencies, and suggested instructional strategies. A glossary is also provided. (NLA)

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BUSINESS / MARKETING EDUCATION

BUSINESS ANALYSIS / BUSINESS COMPUTER APPLICATIONS

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The University of the State of New York
The State Education Department
Division of Occupational Education Programs
Albany, New York 12234

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BUSINESS MARKETING/EDUCATION

BUSINESS ANALYSIS/BUSINESS COMPUTER APPLICATIONS

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Office of Occupational and Continuing Education
Division of Occupational Education Programs
Albany, New York 12234

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INTRODUCTION

All business and marketing activities stem from an exchange between two individuals of either a product, service, or idea/information. This transaction concept is prevalent throughout current business/marketing education instruction. Once this basic concept is understood, students must be cognizant of the needs of business to find ways to handle their particular types of business transactions most efficiently.

Increasingly, business organizations of all varieties are becoming dependent on up-to-the-minute information upon which to base their operations. Information needs may be related to the availability of raw materials, partially completed component parts, finished goods, or to worldwide consumer demands for a product or service. Business is also dependent upon the development of an operating system for producing and marketing their products or services. This operating system is usually unique to the business and is designed to match the needs identified through information gathering and processing.

Modern information gathering and processing is dependent upon software and hardware that will provide information quickly and accurately. Students must, therefore, understand the availability and use of software and hardware designed to satisfy a variety of business needs. Every business course should strive to provide these types of understandings.

Nearly all jobs will soon require workers to know how to process data and/or use information systems. Thus, in its new role business education calls for the development of a balanced program that will enable students to acquire a broad understanding of the configuration and operation of various information systems. All secondary business education instruction should provide students with basic skills that will enable them to adapt quickly to the changing requirements of new technologies and to benefit from lifelong education and training opportunities.

It is suggested that this philosophical framework be emphasized in all business courses, thus helping students to understand how a particular course relates to:

- The exchange between two persons of a product, service, or idea/information (a transaction).
- The information needs of a business.
- The development of systems for satisfying a business's objectives.
- The organization of an information system in support of the business's objectives.
- The utilization of available information processing software and hardware.
- The need for on-going training and retraining of those involved in the transaction of business

SEQUENCE PLANNING

The available business/marketing course sequences are designed to ensure the correlation of business education and marketing education, to provide a variety of options for students to meet sequence requirements, and to develop broad-based, transferable skills and specialized competencies. Students, teachers, and guidance personnel are encouraged to review the 3- and 5-unit business/marketing sequences and to develop an educational plan for each student that will provide maximum career options.

Business Analysis/Business Computer Applications is a required course in the business/marketing core and, ideally, will be scheduled at the 10th grade. Keyboarding/Communications should be scheduled prior to or at the same grade level because of the dependence of Business Analysis/Business Computer Applications on keyboarding skills. Such courses as Financial Information Processing, Electronic Information Processing, Accounting, and Principles of Marketing build upon Business Analysis/Business Computer Applications and should ordinarily be scheduled at a subsequent grade level. Students may, however, schedule Business Analysis/Business Computer Applications at either the 11th or 12th grade in conjunction with any of these advanced courses.

DESIGN OF THE SYLLABUS

Business Analysis/Business Computer Applications has been designed to be offered either as two, one-semester, half-unit courses, but preferably, as a two-semester, one-unit course. Course content emphasizes business transactions, the basic business functions, and the systems approach to business operation. The student also experiences specific applications of computer technology related to business and marketing employment. The twelve modules of the half- or full-year courses are as follows:

Business Analysis

- The Framework of Business
- Universal Activities of Business
- Selected Business Subsystems
- Your Place in Business

Business Computer Applications

- Business Operations Overview
- Computer Systems and Applications
- Business Word Processing Applications
- Business Database Applications
- Business Spreadsheet Applications
- Business Graphics Applications
- Interrelated Applications
- The Computer, Society, and the Individual

All modules and subtopics are introduced by a short overview designed to clarify the focus of the content. Each module also identifies specific student PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES to be achieved by the student. In addition, a series of SUGGESTED INSTRUCTIONAL STRATEGIES provide the teacher optional and supplementary instructional approaches from which to select those most compatible with student interests, abilities, and local school resources.

For each performance objective there must be a basic understanding of related facts, definitions, and specific knowledge areas. In most situations, achievement of the supporting competencies will demonstrate that the student has mastered the performance objective. Taken together, the performance objectives and supporting competencies form the overall instructional content of the program.

A suggested timeframe is indicated for each module. The time allocations are not intended to be prescriptive but to suggest to the teacher the relative importance of the module.

The modules may be covered in the order presented in the outline or integrated between Business Analysis and Business Computer Applications. It will be noted that the first module of Business Computer Applications serves as a review of Business Analysis and may be given minimal treatment when the two phases of the course are offered contiguously.

The Performance Objectives/Supporting Competencies and Suggested Instructional Strategies are keyed to the content outlines as an aid in instructional planning. A glossary at the end of the syllabus provides a definition of many of the terms included in the various modules and should be helpful to the teacher for clarifying new terms as incorporated into performance objectives. The glossary may also be useful in evaluating student knowledge and understanding of specific course terminology.

SPECIAL POPULATION PROVISIONS

Students who are educationally handicapped have been classified by the local school district Committee on Special Education (CSE) and receive special education to the extent needed for progress in school. Most students who require special education attend regular classes in conjunction with special education programs. Such students must have access to the full range of programs and services provided by the school district. No student can be denied membership or participation in a curricular or extracurricular activity on the basis of a disability. It is important that students with handicapping conditions are ensured of access to the total school program.

INTRODUCTION

The majority of students with handicapping conditions have, by definition, the intellectual capacity to master the curricular content requirements for a high school diploma. Such students must attain the same academic standards as their nonhandicapped peers in order to meet these requirements. Students with handicapping conditions are provided instruction in a wide variety of settings from regular education to special education classes. Teachers providing instruction through these modules should become aware of the needs of those students with handicapping conditions who have been appropriately placed within their classes. Instructional techniques and materials must be modified if needed so that the information can be attained by such students. Teachers in both occupational and special education will need to maintain ongoing communication on the programmatic and individual student needs.

This course includes suggestions for modifying instructional strategies and materials. The suggestions are intended to provide teachers with a range of examples and should be viewed as a point from which teachers in both special and regular education can develop additional strategies in coordination with each program area.

In some modules, references to time limits have been included in the performance objectives. The adherence to such time limits may be difficult for some students with handicapping conditions. For such students, time limits may need to be modified or deleted and alternative ways to demonstrate competency be considered. These alternatives should be discussed by the Committee on Special Education and teachers involved in the student's instruction.

Strategies for Modifying Instructional Techniques and Materials

1. Prior to having a guest speaker or taking field trips, it may be helpful to structure the situation. Use of a checklist or a set of questions generated by the class will help students focus on relevant information. Accessibility for students with handicapping conditions should be considered when field trips are arranged.
2. To increase accessibility of computers and software some students with handicapping conditions may need alternatives to input and output devices as well as modifications to hardware and software.
3. Explore and provide alternative input devices to enable computer access for students with handicapping conditions (i.e., eye latches, voice input devices, touch screens, joy sticks, mouse devices, key guards, special keypads or expandable/oversized keyboards).
4. Provide students a diagram of the computer to assist with identification of the computer parts.

5. Students with handicapping conditions may use alternative testing techniques. The needed testing modifications must be identified in the student's Individualized Education Program. Both special and occupational education need to work in close cooperation so that the testing modifications can be used consistently throughout the student's program.
6. Use focused activities such as before and after films, filmstrips, and videotapes to fully utilize this medium. For example: Statements such as "while you are watching this film, pay particular attention to..." or "list all the..." or "we will be discussing this film after we view it so you should list any questions, issues, topics you would like to discuss." Stop the film at critical places to reinforce, expand, and/or highlight a concept.
7. Some students with learning disabilities which affect the speed at which they retrieve information may require alternative time limits in test situations. These modifications enable such students to demonstrate mastery of skills and attainment of knowledge in the subject being tested.
8. Check periodically to assess student understanding of lectures, discussion, and demonstrations. Encourage students to express their understanding. It may be necessary to have small group discussions or work with a partner to determine this.
9. Provide students and special education teachers with a tape of lectures that contains substantial new vocabulary and of guest speakers for further review. Summarize key points presented by guest speakers.
10. Assign a partner for the duration of a module to a student as an additional resource to facilitate clarification of daily assignments, timelines for assignments, and access to daily class notes.
11. When assigning long-term projects/reports, provide a timeline with benchmarks as indicators for completion of major project/report sections. Students who have difficulty with organizational skills and time sequence may need to see completion of sections to maintain the organization of a lengthy project/report.
12. Encourage students with handicapping conditions to maintain a class notebook containing information presented during class, field trips, etc. Periodically inspect the notebook for organization and sequencing of key points covered during the course.

13. Some students who have difficulty with visual perception or spatial relationships may not be able to complete standard forms. Enlarged print copies would be helpful for completion of some assignments.
14. Provide students with prepared outlines, forms, vocabulary lists, and definitions in advance in order to foster greater familiarity with concepts and terminology. This effort could be coordinated with the special education teacher and reinforced in special education programs.
15. Some students will understand basic mathematical concepts but will have difficulty with calculations. Provide such students with calculators, tables and/or pocket charts when doing manual calculations.
16. Allow students to tape record key informational lectures to use in conjunction with written notes for studying course materials.
17. Instruct the student to practice a task beyond initial mastery. Improvement in learning, retention, and transfer will be facilitated by overlearning.
18. When using crossword puzzles and/or other word games for review, provide students with a resource word list from which to choose answers.
19. When discussing career options, include career possibilities for individuals with handicapping conditions.
20. Have students interview employees with handicapping conditions to learn about job accessibility.

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BUSINESS ANALYSIS

Business Analysis offers students a broad overview of modern business organization and operation. Students will learn that today's business organizations rely on a variety of systems and subsystems to carry out their transactions as they adapt to the emerging Information Age. These systems and subsystems must be designed to accommodate the information, product, or service the business provides. Further, students will learn that most business organizations are dependent upon the ability to make a profit by meeting a societal need, requiring them, therefore, to be organized to handle their particular types of business transactions most efficiently.

Students will examine how businesses are organized to provide a product, a service, idea, or a combination of these, and will become acquainted with activities universal to most businesses which allow them to meet consumers' needs. They will then become acquainted with selected business subsystems found in most business enterprises. They will see how, in the evolution of American business, organizations have become increasingly dependent upon information to manage broader and more aggressive marketing, external environmental influences, resource development, and strategic decision making. Students will then explore some of the possible impacts on their future in the workplace brought about by the Information Age.

MODULE 1: THE FRAMEWORK OF BUSINESS

This module is designed to give students an overview of the systems, concepts, and principles involved in today's workplace. Students will become aware of business's increasing reliance on fast and accurate information. They will study various types of business organizations as well as nonprofit and public sector organizations. This global view of business will prepare students to explore the manner in which people, resources, and computers interact in the workplace.

Key Concepts:

- Complex technologies develop from more simple technologies, and the development is a constantly evolving process.
- The development of technology results in a greater and more rapid production of goods and communication of information.
- Businesses are organized to satisfy needs and wants of consumers.
- Business serves society by affording an easy means of exchange, creating wealth, and providing employment.
- Profit is the driving force behind most business organization.
- Nonprofit organizations face operating concerns similar to profit-seeking organizations.
- All forms of business organization are designed to provide a product, service, or idea/information.
- Businesses organize to convert resources into more valuable and accessible end-products.
- Risk is a characteristic of business organizations.
- Transactions underlie all business activity.
- All organizations consist of systems and subsystems designed to meet their goals and objectives.
- An effective information base is essential to an organization's operating system.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	The Evolution of American Business	1	1
	A. The development of agriculture		
	B. Industrialization and mass production		
	C. Growth of the service economy		
	D. Emphasis on global marketing		
	E. Modern societal concerns of business		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
II.	The Information Revolution	2	2, 4
	A. Causes B. Impact of technology	3	3, 4
III.	The Purpose of Business	4	5, 6
	A. Satisfy human needs and wants 1. Individual 2. Societal B. Afford an easy means of exchange C. Create wealth D. Provide employment	5	5, 6
IV.	Business Motivation	6	5-7
	A. Profit B. Nonprofit 1. Private 2. Governmental	7	5, 6
V.	Kinds of Businesses	8	8, 9
	A. Production enterprises 1. Farming 2. Forestry 3. Mining 4. Goods producing B. Distribution enterprises 1. Transportation 2. Warehousing 3. Wholesaling 4. Retailing C. Service enterprises 1. Personal services 2. Business services 3. Repair services 4. Entertainment and recreation services 5. Hotel and lodging services 6. Food services		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
VI.	Forms of Business Ownership	9	10, 11
	A. Proprietorship		
	B. Partnership		
	C. Corporation		
	D. Alternative forms		
	1. Cooperative		
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	3. Limited partnership		
	4. Joint venture		
VII.	Features of Business	10	12 -15
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	1. Human		
	2. Procedures		
	3. Capital		
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	D. Risk		
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	3. Output		
	4. Feedback		
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	1. Input		
	2. Processing		
	3. Output		
	4. Distribution/Transmission		
	5. Storage/Retrieval		
	C. Transaction driven		
	D. Dependent upon type of business		

Estimated teaching time: 3 weeks (9 hours)

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: THE EVOLUTION OF AMERICAN BUSINESS

Students will be given an opportunity to reflect on the changes that have occurred in the nature of American business from the time when most business activities centered around agriculture, then manufacturing, to today where a major portion of business involves providing consumer services in an Information Age. They will be able to identify circumstances, including technology, that motivated the transition from the agricultural to the industrial, to the present-day service economy. Students will explore how American genius for discovery and innovation led to mass production of products and ways to satisfy an increasing demand for consumer services in the United States and around the world.

1. Following instruction, the student will identify several characteristics associated with the agricultural age, the industrial revolution, and the more recent technological/information/service era, with a degree of accuracy and understanding acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify characteristics of the agricultural economy in America during the 1700's and early 1800's
   b. List changes that occurred in American business during the Industrial Revolution of the mid-1800's and early 1900's
   c. List factors associated with the technological/information/service era in which we currently live

TOPIC: THE INFORMATION REVOLUTION

Students will explore the many circumstances leading to the increased use of and reliance on information in today's business. They will review the recent history of computers and the ways in which computer technology is being used by individuals and businesses to process information.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

2. Following instruction, the student will identify the factors which contribute to the explosion of information in today's society, with a degree of accuracy acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Understand the dependence of business on increased and timely information
   b. Identify causes for the increased dependency on information
   c. Recognize external factors contributing to the need for information

3. Following instruction, the student will explain how information needs are met by computer technology, with a degree of understanding acceptable to the instructor.

   In order to do this, the student must be able to:

   a. List typical business computer applications in society
   b. List common personal computer applications
   c. Cite specific information needs of individuals and/or businesses

TOPIC: THE PURPOSE OF BUSINESS

Students will recognize that the purpose of every business organization is to satisfy a need or want which may arise from individual consumers, other businesses, or governmental units. Students will understand that the success of a business is dependent upon its ability to successfully meet the need for a particular good or service. They will learn that business also serves individuals and society in other ways by affording an easy means of exchange, creating wealth, and providing employment.

4. Given a list of ten different types of enterprises, the student will identify an individual and/or a societal need satisfied by each, with a degree of accuracy acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Distinguish between an individual and a societal need
   b. Identify common individual needs and wants
   c. Identify common societal needs and wants
   d. Describe the need or want satisfied by each listed enterprise

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

5. Given instruction, the student will describe the significance of three purposes of business in addition to the ability to satisfy human needs or wants, to a degree of accuracy acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify the purposes served by business
   b. Describe the significance of each purpose

TOPIC: BUSINESS MOTIVATION

Students will understand that under the American free enterprise system the primary motivation of the majority of business organizations is the desire to make money from their operations--to make a profit. Students will learn, however, that both private and public nonprofit organizations exist that aim to satisfy individual or societal needs and wants that profit-seeking businesses do not or cannot meet. They will understand that nonprofit organizations face most of the same operating concerns as profit-seeking organizations.

6. Given instruction, the student will explain the profit motive which predominates in the American free enterprise system, with a degree of understanding acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Understand the concept of free enterprise
   b. Distinguish among business income, business expenses, and net profit
   c. Relate the concept of profit to the creation of wealth

7. Given instruction, the student will compare the motivation of profit and nonprofit business enterprises and cite examples of private profit, private nonprofit, and governmental enterprises, with a degree of accuracy and understanding acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Explain the difference in the motivation of profit and nonprofit business enterprises
   b. Cite examples of private nonprofit and governmental organizations
   c. Cite examples of private profit enterprises

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

TOPIC: KINDS OF BUSINESS

Students will learn that all forms of business can be grouped under one of three major headings: production, distribution, or service enterprises. They will learn the basic characteristics of these three forms of business and explore the past, present, and potential use of information on businesses within the three groupings.

8. Given instruction, the student will describe distinguishing characteristics of three major kinds of business and identify differences and similarities in their information needs, with a degree of accuracy acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify the three major kinds of business enterprise
   b. Differentiate among characteristics of the three major kinds of business
   c. Cite examples of businesses that fall within each classification
   d. Recognize information needs of businesses
   e. Differentiate among information needs

TOPIC: FORMS OF BUSINESS OWNERSHIP

Students may have been introduced previously to the three primary forms of private business ownership: proprietorship, partnership, and corporation. This topic will provide the opportunity for students to review the advantages and disadvantages of each of these principal forms of business organization and to become acquainted with alternative forms popular in today's business environment.

9. Given a case involving a new business start-up, the student will select a form of ownership and explain why it is appropriate, with a degree of understanding acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify the three principal forms of private business ownership
   b. Identify alternative forms of ownership
   c. List advantages and disadvantages of each form of ownership

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

TOPIC: FEATURES OF BUSINESS*

Students will be introduced to three basic understandings in this topic: (1) the uses businesses make of human, capital, natural, and information resources; (2) how businesses change their resources in order to make them more useful or desirable to the public; and (3) the effect of supply and demand upon business activities.

Students will understand that businesses must use a variety of resources to make their product or service more valuable. Anyone who aids in the creation of additional utility is entitled to a reward. They will understand that the combination of these factors, along with the supply and demand for a particular good or service and the risk taken, determine the price in the marketplace.

10. Given a specific individual or societal need or want, the student will explain how a business considers resources, utility, supply and demand, and risk in an effort to meet that need or want, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List resources essential to business operation
    b. Distinguish among place, time, form, and possession utility
    c. Explain the relationship between supply and demand
    d. Identify common business risks

* This topic may build upon concepts introduced in Introduction to Occupations.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

TOPIC: THE SYSTEMS CONCEPT**

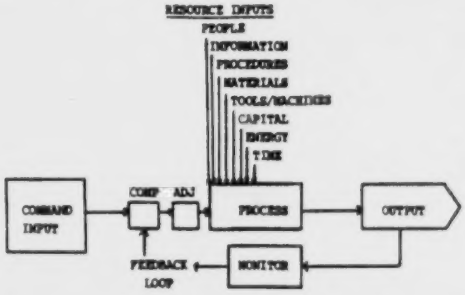
Students will understand that business transactions are the driving force behind all business activity. The business systems and subsystems must be designed to handle these transactions quickly and efficiently. Students will gain an understanding of the range of information that a business requires, such as knowledge of raw materials, the product or service demand potential, production costs, market competition, and the possible effects of changing local, regional, national, or world economy. This information base is essential to an organization's operating system.

Students will learn that such an information system should be perceived as any combination of interacting components having a common goal or purpose and requiring a variety of resource inputs: people, procedures, information, tools, machines, capital, energy, and time. Further, they will learn that a system makes it possible for relationships to be formed between business and consumers in the form of business transactions--an exchange of information, a product, or service.

11. Given a simple, well-known business enterprise, the student will explain how the business conforms to the systems model, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify the essential elements of a systems model
    b. Relate business activities to the essential elements of a system



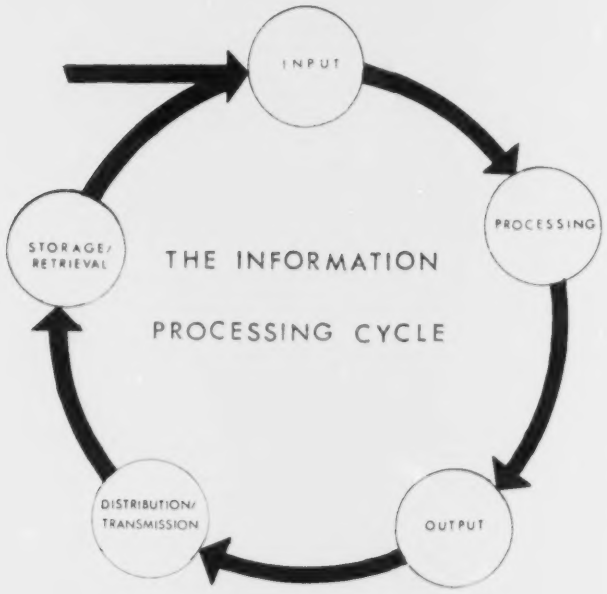
**This topic may build upon concepts introduced in Introduction to Technology.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

12. Given instruction, the student will demonstrate an understanding of the information processing cycle, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Define information processing
    b. List the elements of the information processing cycle
    c. Describe what occurs in each element



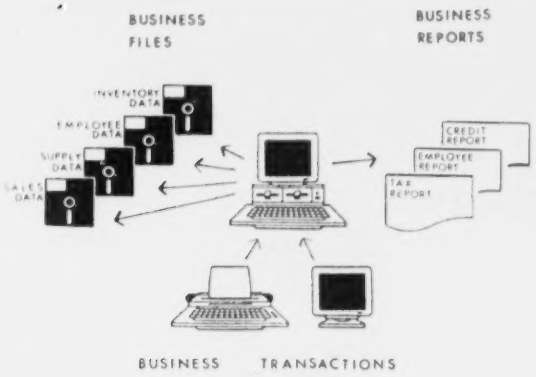
13. Given several businesses, the student will identify five business transactions that must take place in supplying the product, service, or idea/information to the end-consumer, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Understand the meaning of a business transaction
    b. Identify common business transactions
    c. Understand how a business enterprise is structured as a system with subsystems
    d. Describe how business transactions and the systems and subsystems of a business are related

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

13. (Cont'd.)



A TRANSACTION PROCESSING SYSTEM

SUGGESTED INSTRUCTIONAL STRATEGIES

1. Provide students with the chart, The Evolution of American Business and Society, on Page 13. Through class discussion, articles that summarize the growth and change mileposts in United States history, interviews with librarians, social studies teachers, or others, complete the chart for review and synthesis in class. Each student should be responsible for parts of the chart, not for gathering all required information.

2. A variety of inventions have contributed to the marvels of modern day techniques for information gathering, processing, and transmission. Through brainstorming, develop with the class a list of inventions that have contributed or are currently contributing to information effectiveness. The following are cited as examples:

   -printing press
   -telegraph
   -telephone
   -radio and television
   -computers
   -fiber optics

   After the list is developed, raise the following questions:

   a. Which of these inventions do you believe is most critical to modern-day society?
   b. What precautions can businesses take today to guard against an information "blackout"?
   c. What are some of the principal benefits to business of modern information technology?

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

The Evolution of American Business and Society (from Strategy 1, Page 12)

EVOLUTION OF AMERICAN BUSINESS AND SOCIETY			
Dimension	**1700 to Early 1800 Characteristics**	**Mid 1800 to Mid 1900 Characteristics**	**Current Characteristics**
Nature of employment			
Societal			
Communication/ Transportation			
Products and Services			

(Other categories: Legal/Political, Business/Industry/Employment, Global Relationships, Major Events - war, economy)

3. Direct students to survey a small, local business and prepare a list of the activities and/or services that currently involve the use of computers. The following are cited as examples:

   -Electrical service (monthly billing)
   -Telephone (monthly billing, information, automatic connections)
   -VCR's (in-device memory)
   -Vehicles (production and service, dashboard monitoring devices, certain repair diagnoses)
   -Business applications (UPC scanning devices, inventory, payroll)
   -Security applications (timing devices, heat sensors)
   -Elevators (monitored programming, alarm systems)

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

4. Provide students with a chart similar to the one illustrated below. Instruct students to identify type(s) of information that might be needed by each of the individuals listed and to estimate the importance computers play in accessing the information. An arbitrary scale will allow discussion of which types of information are most dependent upon computers for information/communication. In the last column, students should indicate other possible avenues of information/communication that might be applicable in the absence of computers. (Teachers should redesign the form to fit the locality involved.)

COMPUTERS AND INFORMATION

Endeavor	Information Needed	Computer Importance High = 5 Low = 1	Alternative Sources
High School Student			
Emergency Worker			
Teacher			
Fast Food Restaurant Manager			
Stockbroker			
Clothing Manufacturer			
Independent Trucker			
Supermarket Manager			

*This chart is designed as a discussion generator; answers will vary.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

5. Select 15 or more well-known local/regional enterprises from the yellow pages of a local telephone directory. The selection should represent a cross-section of the business community. Have the class analyze each enterprise in terms of its primary purposes and motivation. Create a matrix that students may use in their analysis. A sample matrix, **The Purpose of Business**, follows.

   Instruct students to:

   a. Identify with a "P" the primary characteristics of each of the enterprises listed and related comments where appropriate.
   b. Enter an "S" in the correct spaces to indicate secondary characteristics of each enterprise.

   After students have completed the matrix, conduct a class discussion to determine areas of confusion or disagreement.

THE PURPOSE OF BUSINESS
(Sample Matrix)

Name of Enterprise	Motivation			Need/Want Satisfied*		How Need/Want is Satisfied			Other Characteristics of Enterprise		
	Profit	Non-Profit									
		Private	Governmental	Individual	Societal	Product	Service	Idea	Means of Exchange	Creation of Wealth	Provides Employment
Ace Gas & Repair Station, Elmwood Avenue	P			Energy Source Transportation		P	P			P	S
				P							
Glenda's Beauty Salon 14 Denver Street	P			Self Esteem Physical Well Being		P	S			P	S
				P							
Police Station, 3rd Precinct Third Street			P	Civil Order Protection			P				S
				P	S						
Great Eastern Bank Marlow Terrace	P			Capital acquisition Investment security			P	S	P	P	S
				P	S						
High School Student Council		P		Civic Responsibility Personal growth		S	S	P			
				S	P						

*Needs and wants may be provided by the teacher on a prescribed list, or students may be allowed to express these in their own words.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

6. Ask each student to interview a relative, a neighbor, or a friend who is employed in a local/regional business enterprise regarding the primary purposes and motivation of the enterprise. The following questions could be raised:

   a. How does the organization seek to satisfy an individual or a societal need or want?
   b. How does the organization create wealth?
   c. How does the organization provide a means of exchange?
   d. Does the organization benefit the community in other ways? How?
   e. Is the organization a profit making, a nonprofit private, or a nonprofit governmental enterprise?

   Have students record the responses to the questions. Use the results of the interviews as the basis for a class discussion.

7. Create a display illustrating the comparative costs of consumer goods in the United States versus other economies. Use this display to initiate a class discussion on the merits of the free enterprise system.

8. Have students develop a list of businesses/industries that tend to operate outside of the borough or area in which the school is located. Ask students to suggest reasons why the locality does not attract or support such enterprises. Raise the question, "What changes would have to take place in the community to attract such businesses?"

9. Have students develop a chart that identifies information needs critical to the operation of each of the production, distribution, and service enterprises listed in the Content Outline under "VII. Kinds of Businesses." List the kinds of businesses in the first column and important information needs in the second column for students to complete. After the charts are completed, conduct a class discussion of the importance of speed of information, and consequences of lack of information or misinformation. A possible format for the chart follows:

BUSINESS INFORMATION NEEDS

Kinds of Businesses	*Important Information Needs*

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

10. Ask students to conduct a survey of businesses in the community that offer the same product, service, or idea. They should also try to determine which of these businesses are operated as sole proprietorships, partnerships, or corporations. Based upon the outcome of the survey, conduct a class discussion of the following points:

    a. What was the product or service common to the businesses of a similar type?
    b. Were these businesses organized in the same way (sole proprietorship, partnership, corporation)?
    c. If there were differences, what factors may have prompted the owners to seek a different form of organization?
    d. If the businesses were organized similarly, what may have been the reason?

11. Request a local business owner or manager from a bank, a legal firm, or a business organization to address the class on alternative forms of business ownership. Prior to the class visit, instruct students to develop a list of questions relative to the following forms of business ownership:

    a. Cooperative
    b. Franchise
    c. Limited partnership
    d. Joint venture

    Edited and "rehearsed" questions might include the following:

    a. What are the unique features of each form of ownership?
    b. How, if at all, do legal responsibilities of the owners differ from those of the three major forms of business ownership?
    c. In granting loans, or financial services to businesses operated in one of the alternative forms, are there special requirements or considerations?
    d. Is it common for one of the alternative forms of business ownership to change or evolve into one of the three common forms?
    e. What enterprises are most commonly associated with alternative forms of ownership?

    It is important for the speaker to be aware of the main questions prior to visiting the class.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

12. Videotape five (5) television commercials to show in class or assign students to watch five (5) different television commercials, and then complete the following chart:

Product, Service or Idea Advertised	Target Audience	Need or Want Satisfied	Utility Provided

Alternative:

Use newspaper and/or magazine advertisements to complete the above chart and create a bulletin board display of several samples provided by students.

13. Have students identify two or more local or regional business organizations that fall within each of the following classifications:

-Production enterprises (farming, forestry, mining, goods producing)
-Distribution enterprises (transportation, warehousing, wholesaling, retailing)
-Service enterprises (personal service, business services, repair services, entertainment and recreation services, hotel and lodging services)

Then develop a list of general risks likely to be encountered by each type of business enterprise. Highlight those risks common to all enterprises and those that are unique to a specific type of enterprise. Make certain that students understand that risks may be shared (i.e., purchase of insurance) and that certain risks require different, independent actions or transactions to limit the extent of the risk. Challenge students to suggest ways in which a business enterprise might reduce both internal and/or external risks.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

14. Profit, Inc., was formed by Matthew Mony to prepare income taxes for people. Matthew decided to start his own business with an initial investment of $5,000 from his savings and $20,000 that he is borrowing from a bank. Prior to starting his own company, Matthew worked for a large tax preparation company, and he was earning $20,000 a year with potential for advancement and higher earnings.

    a. What business motivation did Matthew have?
    b. What risks did he take?
    c. How does Matthew represent the free enterprise system?

    If Matthew gave himself a yearly salary of $25,000, his payments to the bank were $1,000 per month, his other expenses were $13,000 annually, and he earned $50,000, what would be Matthew's net profit or loss? What factors should Matthew consider in deciding whether or not to continue in his own business for another year?

15. Provide students with a list of products such as those below asking them to describe how sales of these products (or others) would be affected by weather, supply, demand, age of buyer, geographic location of buyer, etc.:

bicycle	umbrella	gold earrings
tool kit	disc player	used car
50-watt stereo	notepaper	bananas
surfboard	wedding ring	snow shovel

16. Students frequently have difficulty understanding that business enterprises are organized as a system to operate in a predictable manner. However, a system that students probably know best is their school.

    a. Discuss similarities and differences between the school as an "enterprise" and students' concept of a business.
    b. Provide students with an organizational chart(s) of the school district. Explain how division of responsibility and lines of authority are inherent in all enterprises.
    c. Develop with students a systems model of how the school functions in relation to the goals it seeks to achieve, i.e., high graduation rates, high placement of graduates in employment or post-secondary education programs, low dropout rates, high attendance rates, success on standardized testing, high quality instructional programs, and opportunities for staff development.
    d. Have students make a comparative list of the types of "transactions" that occur in their school and those they envision as occurring in business/industry.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

17. Using a school-based model, have students select a transaction that is clearly related to information/communication. Examples are:

    - development and reporting of student grades
    - a note from a parent/guardian explaining a student's absence
    - a teacher's request to the building principal for additional supplies for a special classroom project

    Students should then

    a. Explain the nature of the transaction in one or two sentences.
    b. Identify the people or offices to be involved in interpreting and processing the transaction information.
    c. Draw a flow diagram, using knowledge about the information processing cycle and the systems concept model, to represent what happens in each step of the processing cycle.
    d. Suggest how feedback is most likely to occur.
    e. Indicate the most likely outcomes from the information transaction.

    This approach may be applied to a business enterprise by selecting a simple information transaction and tracing its cycle and possible outcomes for the business. Highlighting the feedback points and their importance will help students to understand a system and how its operation is both fluid and, often, continuous.

18. Select a small or medium-size business in the local area or borough. Identify the principal products and/or services of the business.

    a. Have students develop a list of transactions that might be "typical" of the type of enterprise selected.
    b. Brainstorm the types of subsystems that might be in operation in the business.
    c. Raise the question as to how the transactions and subsystems might change if the business were larger or smaller.

MODULE 2: UNIVERSAL ACTIVITIES OF BUSINESS

Students will understand that an organization is composed of a set of interrelated subsystems which function to meet the goals of the organization. They will further learn that these subsystems are activities, not departments, and although the composition of these subsystems differs greatly among organizations, the subsystems are interrelated and exist in all organizations.

Key Concepts:

- All organizations engage in production, bridging, external environmental, resource development, and managerial activities.
- The goals and objectives of an organization determine the emphasis given the universal activities and arrangement of subsystems.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Production Activities	14	19
	A. Goods		
	B. Services		
	C. Ideas/information		
II.	Bridging Activities	15	20, 22
	A. Procuring input	16	21
	1. Purchasing		
	2. Recruiting		
	B. Disposing of output		
	1. Customer contact		
	2. Selling		
	3. Transportation		
	C. Assisting in input/output process		
	1. Acquiring capital resources		
	a. Start-up (initial) capital		
	b. Working capital		
	2. Maintaining capital		
	3. Communications		
	a. Text processing		
	b. Data processing		
	c. Voice		
	d. Image		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
III.	External Environmental Activities	17	23, 24
	A. Monitoring customer relationships	18	23, 24
	1. Performing marketing research		
	2. Assessing customer acceptance		
	3. Evaluating customer service		
	B. Assessing competition		
	1. Influx of new businesses		
	2. Competitive products and substitute products		
	3. Competitive pricing and distribution		
	4. Government as a competitor		
	C. Monitoring economic trends		
	1. Employment statistics and projections		
	2. Value of money		
	3. Using economic indexes		
	4. Trade policies		
	D. Monitoring governmental influences		
	1. Labor legislation		
	2. Industry-specific legislation		
	3. General legislation		
	4. Lobbying activities		
	E. Adapting to technological developments		
	1. Research and development		
	2. Changes in training, labor, and jobs		
	3. Accelerated communication		
	4. Changes in production processes		
	5. Speed of technological innovation		
IV.	Resource Development Activities	19	25-27
	A. Motivation	20	28, 29
	1. Worker incentives	21	25-27
	2. Morale development		
	3. Job enlargement/enrichment		
	4. Other methods		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
	B. Training		
	1. On-the-job		
	2. Apprenticeship		
	3. One-to-one		
	4. Classroom		
	C. Evaluation		
	1. Product		
	2. Personnel		
	3. Equipment and supplies		
	4. Systems and procedures		
	D. Work standards		
	1. Efficiency		
	2. Plant and equipment utilization		
	E. Raw material standards		
	1. Materials specifications		
	2. Quality control of raw materials		
	F. Product/service quality standards		
	1. Tests - quality control		
	2. Warranties and returns		
	3. Consumer feedback		
V.	Management Activities	22	30-32
	A. Planning	23	33
	1. Objectives	24	34, 35
	2. Strategic plans	25	32, 36
	3. Operating plans		
	B. Organizing resources, activities, and people		
	1. Formal organization		
	a. Functional		
	b. Product		
	c. Matrix		
	2. Line organization		
	3. Line-and-staff organization		
	C. Directing and coordinating		
	D. Evaluating and controlling		

Estimated teaching time: 6 weeks (18 hours)

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: PRODUCTION ACTIVITIES*

Students will understand that the production subsystem is the technical core of the organization producing the product, service or idea which is bought or otherwise consumed by the market. Although the term "production" is commonly used for processes where the physical form of materials is changed, students will recognize that all processes that create goods, services, or information are contained within the production activities.

14. Following instruction, the student will describe what occurs in the production subsystem of a (1) goods, (2) service, and (3) idea/information-producing business, with a degree of accuracy and understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Define *production subsystems* of a business
    b. Identify types of inputs to production subsystems for goods, services, and idea/information-producing business
    c. Identify types of outputs of production subsystems for goods, services, and idea/information-producing business

*This topic may build on concepts introduced in Introduction to Technology.

TOPIC: BRIDGING ACTIVITIES

Students will understand that bridging activities link an organization with the outside world. These activities involve procuring input, disposing of output, and activities which involve assisting in those processes. Students will appreciate that businesses depend on these connections for their existence. Business is not conducted in a vacuum but depends upon its contacts with the environment.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

15. Given instruction, the student will describe typical activities and common transactions that a business initiates with the outside world to procure the input and dispose of the output in providing a product, service, or idea to end-consumers, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify inputs
    b. Identify transactions which result in these inputs
    c. Identify transactions which result in output

16. Given instruction, the student will describe the factors within an organization that are critical to its functioning effectively with the outside world, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify bridging activities critical to organizational effectiveness
    b. Describe how policies, procedures, goals, or other influences related to bridging activities contribute to organizational effectiveness (i.e., purchasing policy, handling customer calls, hiring policies)

TOPIC: EXTERNAL ENVIRONMENTAL ACTIVITIES

Students will understand that an organization is interrelated with the world in which it operates and must monitor and adapt to relevant changes occurring outside the business that impact on its operation. Students will explore the effect of governmental activities on the local, national, and international levels of today's business firms. They will recognize the impact on the organization from changes in customer relationships, competition, economic conditions, governmental influences, and technological developments.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont.d)

17. Following instruction, the student will describe how a business might be affected by three specific types of external environmental forces that have an impact on its operation, with a degree of accuracy and understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List external environmental forces affecting a business
    b. Explain how businesses are affected by these external environmental forces

18. Given five business situations, each involving a different external environmental activity, the student will identify a potential approach to alleviate the problem in each business situation, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify common external environmental activities
    b. Identify techniques for dealing with the external environment

TOPIC: RESOURCE DEVELOPMENT ACTIVITIES

Students will understand that the internal environment of a firm has many aspects; the human resource is nurtured and monitored according to prescribed standards as are other inputs to the systems such as raw materials and information. They should be familiar with the many development activities affecting the worker, such as motivation, orientation, socialization, rewarding and disciplining, training, compensation, and performance appraisals. Students will understand that other resource inputs such as raw materials, component parts, information, and service systems and procedures must also conform to standards for such things as product/service quality.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

19. Following instruction, the student will describe what prompts businesses to engage in specific types of resource development activities, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Define *resource development*
    b. Identify types of resource development activities
    c. Cite benefits realized by business from each of the resource development activities

20. Given instruction in the variety of elements which may contribute to positive worker motivation, the student will develop a personal prioritized list of elements for his or her first job, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List common aspects of worklife which result in positive worker motivation
    b. Evaluate the importance of each element to the individual
    c. Assign a personal value to each element
    d. Place elements in rank order

21. Given six business situations, each involving a different resource development activity, the student will identify approaches to each situation that will result in improved business performance, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify common resource development activities
    b. Identify techniques for improving the resource
    c. Relate the resource improvement to improved business performance

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

TOPIC: MANAGEMENT ACTIVITIES

Students will understand that a managerial subsystem contains the organized activities for planning, organizing, directing, and controlling the many subsystems of an enterprise; it is concerned with determining general policy and strategy. They will learn that the first step, planning, includes looking ahead, setting goals, and considering the methods for achieving those goals. Students will learn that organizing is essential for defining responsibilities between departments and employees in order to accomplish the goals of the business. They will learn about various styles of leadership and the importance of effective leadership for accomplishing goals. Students will understand that the fourth element, controlling, completes the cycle by establishing standards, measuring performance against standards, and then taking corrective action when necessary. Students will explore the ways in which management activities use information from the various subsystems for problem solving and decision making.

22. Given a case situation involving a specific goal or objective of a business, the student will develop a plan to achieve the goal or objective, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

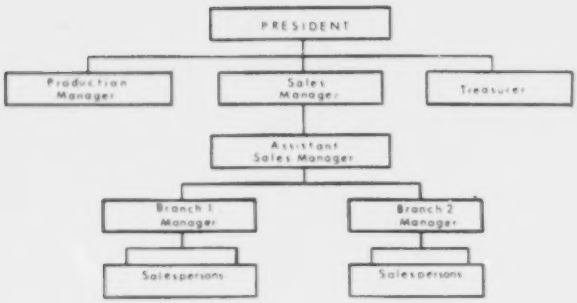
    a. Identify the business's goal or objective
    b. List the steps in the planning or decision-making process
    c. Apply the steps in the planning process to the specific situation

23. Given instruction involving the organization of business, the student will describe how businesses are structured to satisfy their unique needs and objectives, with a degree of understanding acceptable to the instructor.

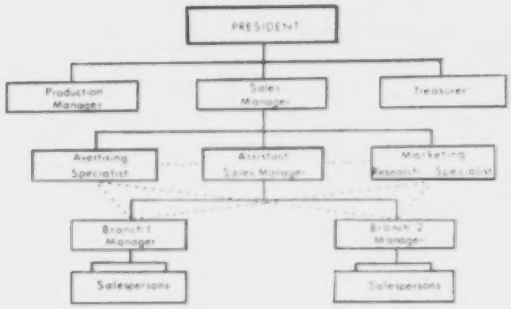
    In order to do this, the student must be able to:

    a. Distinguish between formal and informal structure
    b. Distinguish between staff and line-and-staff organization
    c. Identify features that might be unique to a specific type of business

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)



STAFF ORGANIZATION



—AUTHORITY
---ADVICE

LINE-AND-STAFF ORGANIZATION

24. Given a case study with a task to be completed by ten people with limited time and materials, the student will develop a work plan to complete the task on time, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Define a work plan
    b. Identify characteristics of various leadership styles
    c. Consider individual skills of persons in a work group
    d. Assign tasks based on abilities of personnel
    e. Identify interim target dates
    f. Identify techniques to coordinate materials, time, and personnel

25. Given instruction, the student will cite reasons for controls used in four specific areas of a business organization, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify financial controls
    b. Identify production controls
    c. Identify personnel controls
    d. Identify marketing controls
    e. Explain expected benefits of controls

SUGGESTED INSTRUCTIONAL STRATEGIES

19. Have students select a typical production business that manufactures goods and design a flowchart that depicts the major subsystems involved with producing a specific product. Other students may be assigned to each of the other production subsystems (services, ideas/information). Students may observe a fast-food operation, car wash, school newspaper or yearbook, for example. They should be able to identify actual inputs and outputs inherent in each production subsystem.

    Teachers may wish to make overhead transparencies of student flowcharts to share with the class. An example of a general subsystem design follows:

(NOTE: Subsystems may be either sequential or simultaneous in nature.)

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

20. Select a product, service, or idea business enterprise that the class will establish. Set the scope and parameters of the intended business. Appoint "managers" to determine the needs of the business in regard to:

    a. Procuring input
    b. Disposing of output
    c. Assisting in the input/output process

    Assign the remainder of the class to act as consultants to the three managers for:

    a. determining the type and level of resources that will be needed in each of the three universal activity areas; and
    b. estimating the number of major transactions (or groups of transactions) that must occur successfully to get the business up and running.

    Class discussion should involve how the managers and their staffs will work together on overlapping transactions.

21. Divide the class into groups and assign each group one of the following tasks:

    a. Develop a policy statement or procedure to handle telephone customer contacts effectively
    b. Develop a hiring policy
    c. Develop a guide for sales persons for approaching potential customers

    Use these policy statements as the basis for class discussion of how bridging activities can contribute to the effectiveness of a business.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

22. Provide a grid similar to the following for student use. Instruct students to classify the inputs (resources) and indicate how a business might acquire them.

Inputs (Resource)	Classification of Inputs (Resources) N	R	E	H	C	I*	How Generally Acquired
Aluminum							
Bank loan							
Chemicals							
Consultant							
Education							
Employees							
Land							
Legal assistance							
Lumber							
Sales representatives							
Stockbrokers							
Water							

*N = Natural; R = Raw Material; E = Energy; H = Human; C = Capital; I = Information

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

23. Divide the class into five (5) groups. Have each group produce a chart that details information relative to external environmental business activities. Format and presentation specifics should be provided by the teacher. Completed charts may be displayed for class reference.

    An arrangement similar to the following might be appropriate:

Main Title: EXTERNAL ENVIRONMENT

Individual Titles:

(select one)
- Customer Relationships
- Competition
- Economic Trends
- Governmental Relationships
- Technological Developments

Nature of External Changes	Potential Impact on Business	Resources to Utilize or "How to Cope"

24. Have students prepare a chart or diagram showing the interrelationships of business, government, consumers, competitors, economic conditions, and technology.

25. Have students make a list of items that motivate employees. Provide students with a list of "motivators" from early 20th Century theorists and from current literature. (Teachers might compile a list of the early 20th Century theories by reviewing the writings of Maslow, Herzberg, McClelland, Alderfer, Vroom, Adams, Locke, Skinner, and Pavlov.)

    After comparing the lists, a discussion on the following might be helpful:

    a. Is money (salary) the prime motivator of employees?
    b. Are today's motivators the same as 30 or 40 years ago?
    c. Are motivators different for men and women?

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

26. Divide students into groups and have them select an imaginary business, such as a fast-food franchise, of which they are the owners. Each group has an arbitrary amount of money ($100,000) to spend on Resource Development Activities but they should not simply allocate equal amounts to each activity.

    Have students determine how much they will spend, justify the amount, and develop a pie chart showing the amount spent for each activity to send to the franchisor.

27. Have students make a list of what motivates them to do the following:

    Achieve good grades in school
    Eat nutritious foods
    Get to school on time
    Help other students when they have class-related problems
    Keep their locker or work area at school in neat condition
    Do extra tasks not required by the teacher

    After students have completed their list, have them draw parallels with the workplace and discuss whether workers on the job have similar or different motivation.

28. Have students identify a celebrity who quit his or her job and one who was fired. Prepare a list of reasons why the celebrity quit or was fired.

    a. Identify items that could have been avoided and suggest how.
    b. Identify what actions could have been taken by a superior to prevent the person from quitting or being fired.
    c. Compare commonalities among the lists.

29. Have students complete the Motivation/Satisfaction survey on the next page according to the following directions:

    a. Have students complete the survey as though they were employed.
    b. Have students ask three friends, relatives, or school employees who are employed full time to complete the form.
    c. Compare student results with full-time employee results and discuss similarities or differences.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

MOTIVATION/SATISFACTION SURVEY

As an employee, rate the importance to you of each of the following items. (Number 1 is the most important and Number 12 is the least important.)

	Motivational Item	Rank
1.	Compensation for work	___
2.	Fair treatment	___
3.	Job benefits (insurance, pension, etc.)	___
4.	Job challenges	___
5.	Long-term job security	___
6.	On-the-job training	___
7.	Opportunity to advance in the job	___
8.	Participation in decisions	___
9.	Personal job satisfaction	___
10.	Personal responsibility	___
11.	Recognition and praise	___
12.	Safe working conditions	___

30. Provide students with the following case problem:

Stevens is the proprietor of a small hardware store that employs eight people:

4 in customer sales
2 in stock
1 in purchasing
1 general store manager

A review of performance during the past year reveals several problems with inventory control and the cost of maintaining the inventory. Stevens decides to computerize all aspects of inventory control, with the specific goal of creating a perpetual inventory system within three months.

Determine the major challenges to achieving the goal and develop a plan of action for Stevens' review. The plan should clearly identify the steps in the planning process.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

31. Have students develop a proposal to make some change in school policy; this proposal may be to eliminate or add a rule of school policy. The proposal should be in writing, specify what change is being proposed, provide sound evidence of need, and include an implementation plan.

32. Provide students with the following case problem:

    Nan is the supervisor of the mailroom in a company that ships products all over the country. Nan has a lot of faith in her staff because she feels that the work in her department is more routine than difficult. Consequently, Nan delegates all of the department's work. She spends her entire day acting as an intermediary for the workers and the rest of the company employees who ship products out of her department.

    One day, Nan's boss, the vice-president, sends a memo to her stating that her department has exceeded its budget by 40 percent and that she has to cut costs. Nan immediately turns to her staff and says, "We must cut costs!", and then she returns to her office. The next day a large package is brought in to be mailed first class; one of the workers, however, refuses to mail it first class since fourth class is cheaper, though slower. The person wishing the package to be shipped first class angrily complains to the vice-president about this. When Nan is asked for an explanation, she said she knew nothing about the situation.

    What would you do if you were the vice-president?

33. Contact a local, medium-sized proprietorship or partnership and obtain an organization chart and job descriptions. Present the job descriptions to students and instruct them to create an organization chart. Students should label their charts by type of structure. Compare the actual organization chart to student versions.

34. Provide students with the following case problem:

    The Archway Company manufactures small hand tools and plans to move to a larger facility in three months. The new facility is empty, but has been painted, and the heat, ventilation, and electrical systems are in place. The following employees will be responsible for that move:

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

General Plant Manager
Production Manager
Personnel Director
Engineering and Maintenance Director
Maintenance Staff (2)
Secretaries (2)
Production Supervisors (2)

Students are to design the plan of action, indicating specific tasks of each employee and timelines involved to help make the move smooth, efficient, and on time. After students have completed the plan, they should speculate on the type of leadership style key personnel should possess to facilitate the plan of action.

35. Divide students into groups, appointing one as leader and the remainder as workers. Assign each group a specific task.

After the tasks have been completed, have each group describe the kind of leader they had (i.e., autocratic, diplomatic). Have students discuss whether a person can change his or her leadership style and if some people work better under one style versus another.

36. As a small group project, have students select a local business, such as a fast-food restaurant, and complete a chart similar to the following:

ORGANIZATIONAL CONTROLS

Control Area	*Type of Control*	*Reason for Control or Effect of Lack of Control*
Finance		
Production		
Personnel		
Marketing		
Information		

MODULE 3: SELECTED BUSINESS SUBSYSTEMS

Students will study three specific subsystems of a business organization from both a manual and computerized standpoint. The three subsystems selected are administrative services, finance, and marketing. Students will learn how each of these subsystems is being affected by technology and how they are related to each other and to the business organization in which they operate.

Key concepts:

- Administrative service is evolving into an integrated system providing instant access to information and office services throughout an organization.
- Information processing is a system of processing words and data by coordinating people, equipment, and procedures.
- Business relies on accurate financial information for planning and decision making.
- Risks and credit are important aspects of financial management.
- Marketing brings together the wants and needs of consumers through the delivery of a product, service, or idea/information.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Administrative Services	26	37, 39, 40, 41
	A. Text processing B. Document storage and retrieval C. Reprographics D. Communications/Distribution E. Management support	27	37, 38, 39, 41, 42
II.	Finance	28	43
	A. Accounting	29	44
	1. Recordkeeping	30	45
	2. Budgeting	31	46
	3. Financial analysis a. Financial statements b. Forecasting		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
	B. Financial management 1. Capital a. Start-up (initial) b. Working c. Expansion 2. Credit and collections 3. Risks and insurance		
III.	Marketing	32	47, 48
	A. Buying B. Selling C. Transporting D. Storing E. Financing F. Researching and information gathering G. Risk taking H. Standardization and grading	33	47, 48

Estimated teaching time: 8 weeks (24 hours)

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

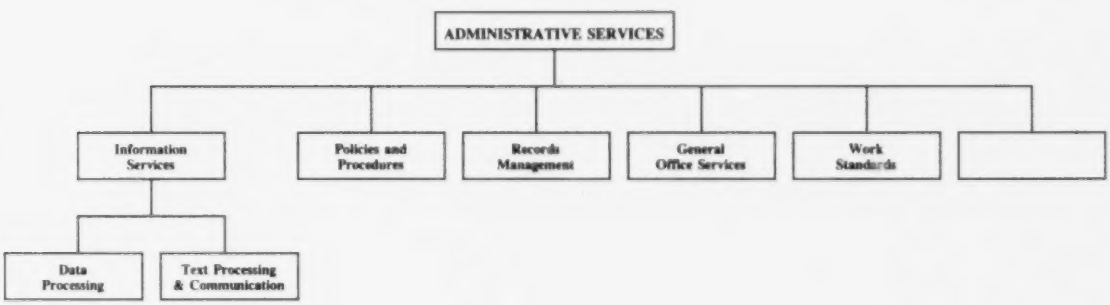
TOPIC: ADMINISTRATIVE SERVICES

Students will understand that the processing of information is more than creating messages and reports on computerized equipment; it is a system of processing words and data by coordinating specialized people, modern equipment and efficient procedures. Students will become familiar with the need for collecting information from historical and current data and from internal and external sources. They will recognize that this information may be analyzed in a variety of ways and then made available in an appropriate mode to those who need the information.

26. Given instruction, the student will explain the significance of an administrative services subsystem to the operation of a business, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Define *administrative services*
    b. Identify business activities associated with an administrative services subsystem
    c. Describe each activity
    d. Explain the value of each activity to a firm



PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

27. Given instruction, the student will explain the way in which technology has changed how administrative services activities are carried out, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Describe the traditional business office
    b. Identify emerging office technology
    c. Identify emerging office skills related to the technology
    d. Describe interrelationships among the activities resulting from technology
    e. Compare the emerging administrative services subsystem to the traditional business office

TOPIC: FINANCE

Students will be presented with a foundation for understanding the financial underpinnings of businesses. Students will recognize some of the financial functions in which businesses are involved, such as borrowing money, extending credit, budgeting income and expenses, and keeping financial records. They will become familiar with the major components of common financial records and statements. They will understand the role of credit and collections, the relationships with financial service institutions, and the manner in which businesses can reduce risk through insurance.

28. Given instruction, the student will describe how business relies on accounting activities, records, and reports to carry on its operation, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Explain common recordkeeping activities
    b. Identify essential accounting statements
    c. Identify purposes of budgeting and forecasting

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

29. Given instruction, the student will describe aspects of the management of the capital needs of a business, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Define *start-up capital*
    b. Differentiate between start-up and working capital
    c. Define *expansion capital*
    d. Identify sources of start-up, working, and expansion capital

30. Given instruction, the student will describe the management of credit and collection in a business, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify the elements affecting the development of a credit policy
    b. Explain the effects of a faulty credit policy on the operation of a business
    c. Identify collection procedures
    d. Explain the effects of faulty collection practices on the operation of a business

31. Given instruction, the student will describe how a business protects itself against common risks, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify common business risks
    b. Identify common insurable business risks
    c. Identify situations when insuring risks might be impractical or impossible

TOPIC: MARKETING

Students will understand how the elements of marketing bring together the wants and needs of consumers by delivering a product or service at both a fair price and a profit. Students will learn also that nonprofit organizations engage in marketing activities to meet their specific goals. They will become familiar with elements of marketing in order to understand the relationship of the marketing subsystem to other business subsystems.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

32. Given instruction, the student will explain the significance of marketing to the operation of a business, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Define *marketing*
    b. Identify activities associated with the various elements of marketing
    c. Relate the concept of supply and demand to the marketing subsystem
    d. Relate time, place, form, and possession utility to the marketing subsystem
    e. Demonstrate an understanding of the relationship among the elements of marketing

33. Given a case involving the marketing of a specific product, service, or idea, the student will develop and justify a marketing plan, with a degree of completeness and understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Explain the need for a marketing plan
    b. Identify the features of a marketing plan
    c. Identify geographic and demographic factors to be considered
    d. Identify marketing channel alternatives
    e. Identify pricing strategies
    f. Identify modes of selling and advertising media
    g. Demonstrate an understanding of the relationships among the elements of the marketing plan

SUGGESTED INSTRUCTIONAL STRATEGIES

37. Mrs. Davis bought an electric space heater from Dix Co., a local retailer, using her Dix charge account. The first time Mrs. Davis used the heater, it began to smoke. Use the following chart to identify the probable (or best) modes of communication/information processing at each stage of the return transaction.

Communication Stage	Mode Used	Benefits of Mode
1) Initial complaint by Mrs. Davis to Dix Co.		
2) Return of heater to the store		
3) Customer Service accepts complaint and return of merchandise		
4) Customer Service notifies Accounts Receivable Department		
5) Customer Service notifies Purchasing Department		
6) Purchasing Department notifies manufacturer of damaged goods		
7) Accounts Receivable Department notifies Mrs. Davis of final disposition of complaint		

38. Have selected students visit one of a variety of office settings (i.e., manufacturing firm, trucking firm, legal firm, supermarket chain, variety department store chain) to determine changes in office technology introduced in the organization within the past three to five years. Have students report their findings to the class. The class should make comparisons at the conclusion of the reports.

SUGGESTED INSTRUCTIONAL STRATEGIES

39. Provide students with the following case problem:

The sales manager wants a packet of materials sent to 125 sales employees assigned to branch offices. The materials include:

- a one-page letter
- a tri-fold, multi-color brochure
- a single side, black and white brochure
- a three-page report, stapled
- a sample of a new business card design for review and comment by salespersons

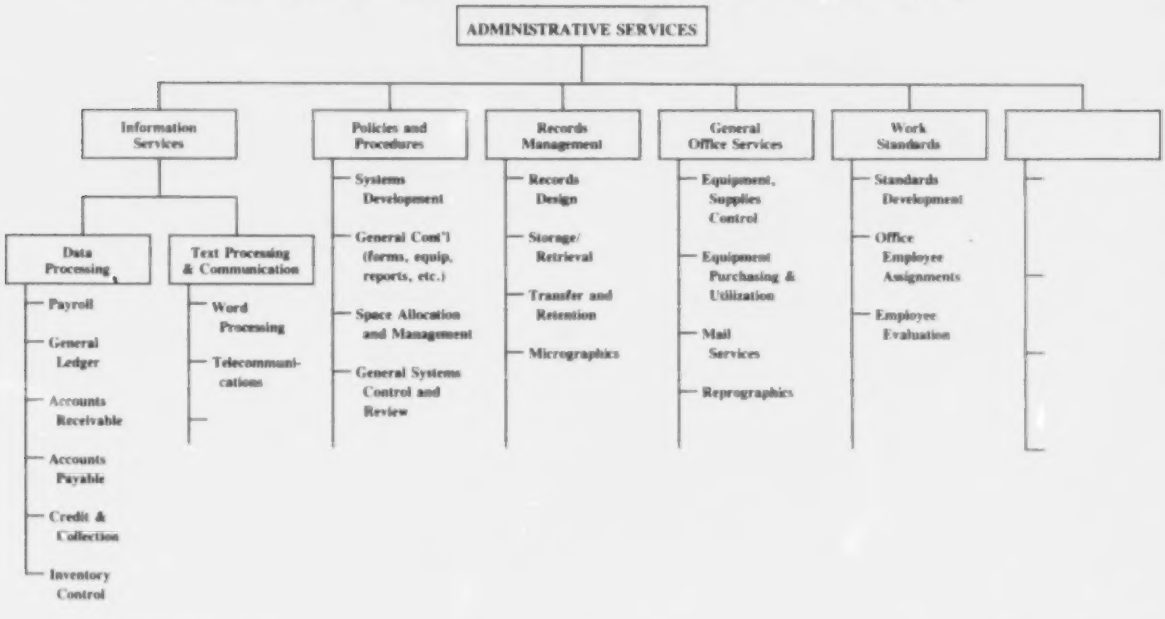
The in-office reprographics capabilities include:

- one single-sheet copier
- one multi-function copier (1 color, 2 sides, automatic stapling, and collating)

As the supervisor of the Administrative Services unit, plan how the needed materials will be reproduced, using

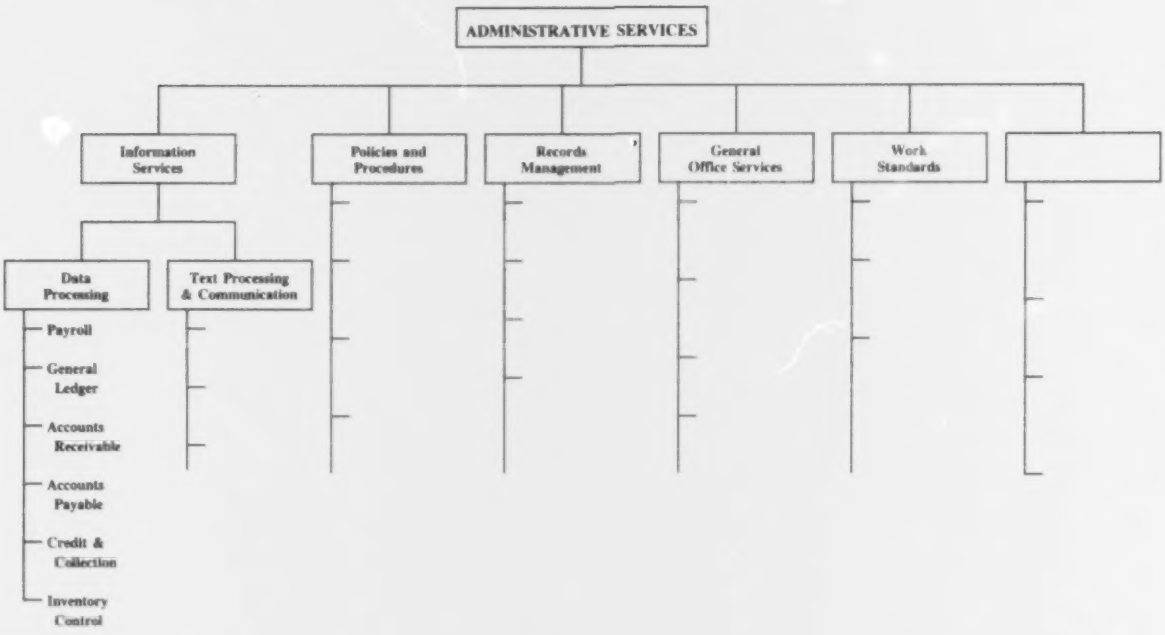
a. in-house capabilities and/or
b. purchased services

40. A. Construct a large wall or chalkboard chart similar to the following:



SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

B. When first presented to students, the chart should appear as:



Leave the subsystem item titles beneath the subsystem titles blank temporarily.

C. Write the subsystem item titles on small rectangular sheets (tape-ons, stick-ons, pin-ons, or magnets).

D. After a general discussion of Administrative Services subsystems, distribute one or more item titles to each student and instruct them to:

   1. Determine under which subsystem the subsystem item titles should be placed
   2. Be prepared to explain why and how the choices were made

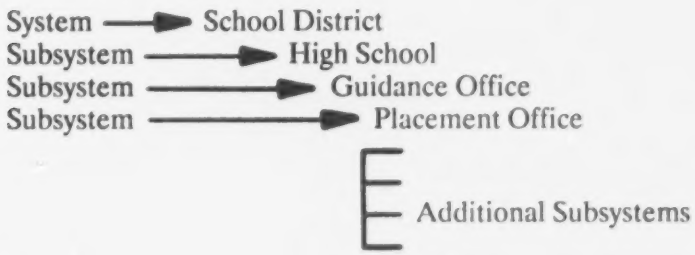
E. Have students place the rectangular slips (subsystem item titles) in the subsystem title positions (vertical order is not important).

F. Rearrange the item title slips in the correct order during the concluding discussion to this activity.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

41. Discuss the local school district or high school as a system. Students are to identify the major subsystems within the major system. Select one office within the school district or high school and discuss or chart its subsystems. Choose one subsystem of the office selected and chart further subsystem structures.

Example:



Students should describe technology employed in the last subsystem structure, how it differs from the technology used in the past, and what new skills are necessary to derive the most effective results from the technology.

42. Have students create a collage which identifies technologies that might be used in a modern office. (Some students might wish to create a collage depicting the traditional office.)

43. Use an overhead transparency of a balance sheet, income statement, and cash flow statement to explain the essential nature of these documents to all businesses, including the very small business.

44. As a class, define a potential small business to start up such as a bicycle repair shop, ice cream stand, wooden toys manufacturing shop, or other business conceived by the class. Determine start-up funds needed and a general plan for operation.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

Then invite a JCA representative, banker, or other financial institution representative to advise the class on:

a. The variety of sources of funds
b. Costs of funds
c. Adequacy or inadequacy of students' request for funds
d. Records and financial statements that students will need and why
e. Business risks
f. Problems associated with default on loans
g. Problems associated with extending credit

45. Have students establish an imaginary loan company to provide loans to students at their grade level. Establish credit criteria and collection policies and procedures.

46. Have students imagine that their class is set up as an insurance company and that each student has invested $10,000. Have students discuss what kinds of risks the class will insure. Ask them to speculate on the premiums they will charge and the kinds of losses they might incur as a company.

47. Divide the class into small groups and instruct each group to develop a plan for marketing an imaginary product. Develop an outline, including the following:

a. Identification of the product
b. Methods for marketing the product
c. Expected benefits from the marketing approach
d. Goals of the marketing plan
e. Primary demographic market(s)
f. Pricing alternatives
g. How, when, and where advertising will be conducted
h. Potential risks

48. Have students select a logo, theme, or character currently on television, in a magazine, on radio, or on a billboard they personally dislike.

a. Identify the target audience for the specific advertising approach
b. Explain reasons for their dislike of the logo, theme or character
c. Develop and explain a new or better approach to reach the intended market

If time permits, develop a "new, improved" message; i.e., slogans, visuals, psychological approach, with poster or narrative reports.

MODULE 4: YOUR PLACE IN BUSINESS

In this module, students will explore the ways in which they can make themselves more valuable in the workplace. Students will have the opportunity to begin to explore some of the job clusters that may be available to them in the information subsystems of a business organization. They will explore the ways in which the business's needs in the Information Age may have an impact on future jobs and the society in which they live.

Key concepts:

- Businesses provide a variety of incentives in return for increased worker satisfaction and productivity.
- Positive human relations can affect productivity and/or profitability.
- Effective career planning takes into consideration maximum opportunity for job mobility.
- One should be prepared for a constantly changing job market.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	People in Business	34	49
	A. Career lattices		
	1. Entry-level		
	2. Mid-management		
	3. Upper management		
	B. Generalists versus specialists		
	C. Significance of human relations		
	1. Business image		
	2. Morale		
	3. Productivity		
	4. Profit		
	5. Team building		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
	D. Worker motivation 1. Satisfaction of basic human needs 2. Recognition and praise 3. Job challenge 4. Scope of responsibility 5. Participation in the management process 6. Fair compensation for services 7. Fair and equitable treatment 8. Opportunities for training and advancement 9. Safety 10. Security 11. Benefit		
II.	Finding Your Place	35	50
	A. Employment related to business and marketing education 1. Finance a. Recordkeeping b. Accounting c. Credit d. Insurance e. Banking 2. Marketing a. Buying b. Selling c. Storing d. Promotion 3. Information processing a. Text processing b. Data processing c. Reprographics d. Information storage/retrieval e. Information communication		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
	B. Employment considerations 1. Skills necessary 2. Education required 3. Career prospects 4. Career mobility 5. Educational growth		
III.	Changes Caused by the Information Age	36	51 - 54
	A. Job market B. Educational requirements C. Worker expectations D. Working environment	37	51, 52, 55

Estimated teaching time: 1 week (3 hours)

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: PEOPLE IN BUSINESS

Students will gain an understanding of the importance of career lattices within a business organization. They should appreciate differences in the job responsibilities of generalists and specialists, and understand how the nature of an employee's job responsibilities relate to the worker's status and earning potential within an organization.

Students will understand the tremendous importance of human relationships to the success of any business enterprise. They will explore the close relationships of employee morale, well-being, and productivity to company/customer satisfaction and company profitability.

Students will also become acquainted with a variety of factors that contribute to worker motivation and job satisfaction. They will understand that when these conditions are present, workers are more likely to give their work maximum effort, and the business is more likely to profit.

34. Given a case involving a human relations problem in the workplace, the student will develop recommendations to overcome potential negative effects on the business, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify the human relations problem
    b. List effects of employee interrelationships on the business
    c. List potential remedial actions
    d. Match the human relations problem with an appropriate remedial action

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

TOPIC: FINDING YOUR PLACE

Students will explore job titles and descriptions of three major areas of employment: those concerned with the finances of a business, marketing activities, and information gathering, processing and dissemination. Students will analyze job titles and descriptions to determine which jobs are likely to require the services of specialists and which require the services of generalists. They will then examine aptitudes and personality characteristics that should be considered before deciding to prepare for a career in one of these major areas of employment.

35. Given the career areas of finance, marketing, and administrative support, the student will identify career lattices and describe the major duties and employment considerations of two jobs from each career area, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List typical job titles in the finance, marketing, and administrative support career areas
    b. Distinguish between specialist and generalist
    c. Identify major duties in selected jobs
    d. Relate job duties to career ladders
    e. Identify employment considerations

TOPIC: CHANGES CAUSED BY THE INFORMATION AGE

Students will assess the changes occurring in the workplace, from the design and the technology being used, to the emphasis on particular types of information. The social impact, from both positive and negative standpoints, will be considered so that students can begin to adapt to these changes.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

36. Given instruction, the student will describe changes brought about by the Information Age which affect employees, with a degree of understanding and accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Define *Information Age*
    b. Identify changes specific to the Information Age
    c. Identify specific examples within each of the major change categories
    d. Relate specific examples to today's employees

37. Given five jobs resulting from technological innovation in the Information Age, the student will select one job and describe the job from the standpoint of the employee and the employer, with a degree of understanding and accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List entry-level requirements of typical jobs
    b. List common tasks of typical jobs
    c. List worker expectations from employment
    d. List business's expectations from employees
    e. Match entry-level requirements and worker expectations to a specific job

SUGGESTED INSTRUCTIONAL STRATEGIES

49. As the manager of Jack's Supermarkets, you have received a request from Lisa Ruiz for a change in her schedule three weeks from now. Lisa is involved in a student leadership organization and placed Number 1 in the regional competitions for the entrepreneurship event. Her request states that she would like a change in her schedule so that she may attend and compete at the State Leadership Conference.

    Facts:

    a. Lisa is a parttime weekend employee.
    b. Lisa has an excellent work record.
    c. Lisa has a perfect attendance record for the past 1 1/2 years.
    d. Lisa has agreed to changes in her schedule to accommodate other employees.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

Problem:

To grant Lisa's request, a fulltime worker must be reassigned. Fulltime employees generally work a regular shift during weekdays and seldom are asked to work on weekends. According to the employees' collective bargaining contract, fulltime workers who are assigned to weekend shifts must receive time-and-one-half pay.

Questions:

a. Is Lisa's request reasonable? Why or why not?
b. If answer to the above is yes, what criteria would you use to decide which workers to approach to cover for Lisa?
c. For the worker(s) that you approach, what will you say to them to elicit a positive response?
d. Do you consider Lisa's request important enough to warrant the development of a store policy on requests for schedule changes? If yes, what might that policy contain, and how might the policy be implemented?

50. Instruct students to complete the following chart for an entry-level job which would lead to established careers in each of the employment areas listed.

	Entry-Level Job		Next Promotional Level	
Employment Area	**Job Title**	**Primary Skills Necessary**	**Job Title**	**Additional Skills Necessary**
FINANCE				
MARKETING				
ADMINISTRATIVE SUPPORT				

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

51. Instruct students to review the job titles in the first column. Check *New Job* if technology has created a *new* job category. Check *Changed Job* if technology has significantly changed the nature of the job. For each *Changed Job* checked, instruct students to identify in the next column ways in which technology has changed the work performed within the job area. In the last column indicate the additional skills, if any, required by the worker to accommodate the changes. Teachers may wish to assign a portion of the list to students or to approach the task as a class project.

EMPLOYMENT OPPORTUNITIES AND THE EFFECT OF TECHNOLOGY

Occupation	New Job	Changed Job	How Technology Has Changed Job	Changed Job Skills Required
1) Advertising representative				
2) Automobile mechanic				
3) Bank teller				
4) Bookkeeper				
5) Business executive				
6) Cashier				
7) Catalog order salesperson				
8) Certified Public Accountant				
9) CAD specialist				
10) Computer programmer				
11) Fast food counter worker				
12) Hospital admissions clerk				
13) Librarian				
14) Newspaper reporter				
15) Police officer				
16) Secretary				
17) Sports announcer				
18) Stockbroker				
19) Stockclerk				
20) Subway train engineer				
21) Telegram delivery person				
22) Telephone operator				
23) Word processing specialist				

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

52. Borrow a video depicting emerging technological developments from a computer equipment dealer, an R & D lab of a company, or a progressive retailer. After showing the tape discuss skills needed by tomorrow's workers, changing educational requirements, and students' opinions on the impact of these changes.

53. Survey current periodicals and locate three articles or advertisements representing technological innovations about to be released. Have students speculate on changes in jobs that will occur as a result of these innovations.

54. Conduct a class discussion on why we are currently said to be living in the "Information Age." Contrast this era with 20 years ago.

55. Select one of the following entry-level jobs leading to a career in the particular field:

    a. Salesperson
    b. Stock worker
    c. Word processing clerk
    d. Accounts receivable clerk
    e. Bank teller

    Using an outline report form, address each of the following items related to the job area selected:

    a. Minimum educational requirements
    b. Minimum specific skill(s) required for employment
    c. Employer expectations of employee
    d. Employee expectations of employer
    e. Information technology the new worker can expect to encounter
    f. On-the-job training anticipated

BUSINESS COMPUTER APPLICATIONS

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BUSINESS COMPUTER APPLICATIONS

Business Computer Applications provides students with a hands-on opportunity to explore some of the modern computer software productivity tools used by business. Each of the various subsystems of a modern business operating system, as explored in Business Analysis, may depend heavily on computer hardware and software to meet its information needs. Technological advances have forced a coming together--a growing interrelationship and networking that enhances and accelerates communication and operations.

Nowhere has this "joining together" become more pronounced than in office operations. A business office, once a combination of separate domains, is evolving into an integrated system. Data processing, word processing, graphics, reprographics, in-plant printing, and telecommunications--to name a few--are now linked together as an administrative services division which can provide instant access to information and office services throughout an entire business.

During this course students will become familiar with the manipulation of data through the use of software programs for word processing, databases, spreadsheets, and graphics. By using this information in a variety of ways, students will become acquainted with the interrelationships between and among information, software programs, business activities, and business systems.

If students have not had basic keyboarding instruction prior to Business Computer Applications, a module of instruction including, at a minimum, Topics V through IX from the Keyboarding module of Introduction to Occupations should be provided. This instruction should precede the module, Business Word Processing Applications.

MODULE 1: BUSINESS OPERATIONS OVERVIEW

The purpose of this module is to review Business Analysis when Business Computer Applications is taught as a stand-alone course. Students will begin to relate their knowledge of the activities and selected subsystems to the information needs of business.

Key Concepts:

- All organizations engage in production, bridging, external environmental, resource development, and managerial activities.
- The goals and objectives of an organization determine the emphasis given the universal activities and arrangement of subsystems.
- Administrative service is evolving into an integrated system providing instant access to information and office services throughout an organization.
- Information processing is a system of processing words and data by coordinating people, equipment, and procedures.
- Business relies on accurate financial information for planning and decision making.
- Risks and credit are important aspects of financial management.
- Marketing brings together the wants and needs of consumers to deliver a product, service, or idea/information.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Universal Activities of Business	1	1
	A. Production		
	B. Bridging		
	C. External environment		
	D. Resource development		
	E. Management		
II.	Selected Business Subsystems	2	1, 2
	A. Administrative services		
	B. Finance		
	C. Marketing		

Estimated teaching time: 1 week (3 hours)

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: UNIVERSAL ACTIVITIES OF BUSINESS

Students will review the interrelationships among production, bridging, external environment, resource development, and management activities of a business.

1. Upon completion of review instruction, the student will explain how the universal activities of business are interrelated, with a degree of accuracy and completeness acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify universal activities of business
   b. Describe each business activity
   c. Relate activities to each other

TOPIC: SELECTED BUSINESS SUBSYSTEMS

Students will review the subsystems of administrative services, finance, and marketing.

2. Given instruction, the student will explain how the administrative services, finance, and marketing subsystems are interrelated, with a degree of understanding acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Define *subsystem*
   b. Identify characteristics of administrative services
   c. Identify characteristics of finance
   d. Identify characteristics of marketing
   e. Cite examples showing how the characteristics tie the subsystems together

SUGGESTED INSTRUCTIONAL STRATEGIES

1. Hold one of the contests below (individual panel or teams) in which:

   - Teacher gives: Example of a transaction
     Contestants identify: The universal activity involved in the transaction
   - Teacher gives: Description of a universal activity
     Contestants identify: The activity being described
   - Teacher gives: Example of a transaction
     Contestants identify: The first and second departments within a business firm that are impacted by that transaction
   - Teacher gives: An aspect of a single transaction
     Contestants identify: The transaction as (1) input, (2) processing, (3) output, (4) distribution/transmission, (5) storage/retrieval
   - Teacher gives: A universal business activity or a business subsystem
     Contestants identify: (1) Universal business activity, (2) business subsystem

   Teachers might consider coordinating this activity with the Technology Department which may be able to provide a contestants' sound-light response board as a problem-solving activity for Technology students.

2. Give an assignment in which the class is divided into three groups:

   a. Administrative services
   b. Finance
   c. Marketing

   Each group is to prepare an oral presentation which

   a. Identifies the characteristics of the subsystem, why it is important to the firm, and with which subsystems it most often interacts
   b. Gives a "pitch" for how the firm cannot do without the subsystem

   Conduct a class discussion pointing out that each group is correct on point (b) but that all subsystems are needed to make a business enterprise function effectively and efficiently.

MODULE 2: COMPUTER SYSTEMS AND APPLICATIONS

Students will progress from an overview of computer systems to specific introduction to the in-house computer system(s). This orientation will prepare students to utilize the in-house equipment in applying common software productivity tools to business problem solving and decision making. A list of terms is provided at the end of the Content Outline to assist students.

Key Concepts:

- A computer is more than a piece of equipment; it is a system comprised of hardware, software, and procedures.
- Computer firmware and software provide the instructions that tell the computer what to do and how to do it.
- The computer is a productivity tool which can aid in decision making.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Computer Hardware	3	3
	A. Types of systems	4	3
	1. Stand-alone	5	3
	2. Network		
	B. System components		
	1. Input devices		
	2. Central processing unit (CPU)		
	3. Output devices		
	4. Secondary storage devices		
	C. Types of computers		
	1. Mainframe computer		
	2. Minicomputer		
	3. Microcomputer		
	D. Peripheral devices		
II.	Mechanics of Computer Operation	6	4, 5
	A. Power on/off	7	6
	B. Accessing storage and software		
	C. Care of hardware/software		
	D. Safety requirements		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
III.	Computer Software and Firmware	8	7
	A. Introduction to software/firmware	9	7, 8, 9
	1. Generic terminology	10	10
	2. Formatting disks	11	11-13
	3. Copying files and disks	12	12-14
	B. Operating system software		15, 16
	C. Firmware		
	D. Applications software		
	1. Common business applications		
	a. Word processing		
	b. Database		
	c. Spreadsheet		
	d. Graphics		
	e. Communications		
	2. Selected specialized applications		
	a. Electronic mail		
	b. Electronic calendaring		
	c. Electronic blackboard		
	d. Desktop publishing		
IV.	Computers in Business: An Introduction	13	12-16
	A. Common applications for Universal Business Activities	14 15	12-16 12-16
	B. Common applications for Selected Business Subsystems		
	C. Justification		
	1. Need		
	2. Cost-effectiveness		
	3. Productivity		
	4. Access to information		

MODULE 2: COMPUTER SYSTEMS AND APPLICATIONS

Terminology:

Create
Delete
Edit
Format
Insert
Print
Save
Retrieve
Update

Total Teaching Time: 2 weeks (6 hours)

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: COMPUTER HARDWARE

Students will become familiar with the vast range of computer systems, the factors that differentiate them, and their common components. This topic is designed to provide a broad-based knowledge of computer systems, in general, and specific knowledge of the in-house computer.

3. Given instruction, the student will compare the structure and components of two computer systems, with a degree of accuracy acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify types of computer systems
   b. Identify components of a computer system

4. Given instruction, the student will compare the structure of the three main types of computers, with a degree of accuracy acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify the three main types of computers
   b. Differentiate among the cost and "power" capabilities of the three main types of computers

5. Given instruction, the student will explain the function of the major components and peripherals associated with a computer system, with a degree of understanding acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify functions of the major components within a defined computer system
   b. Identify common peripheral equipment
   c. Identify the functions of common input devices, output devices, and secondary storage devices

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

TOPIC: MECHANICS OF COMPUTER OPERATION

Students will learn the basic operation of the in-house equipment. This topic will provide students with hands-on experience in the fundamentals of computer operation. Students will also be exposed to considerations of safety and care of the hardware, software, and surrounding environment. This topic will enable students to interact with the computer during the applications phases of the course.

6. Given a demonstration and a demo software program, the student will access the initial operation "frame" of the computer software program and exit the program, with a degree of accuracy acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Operate the switches and input device(s) of the computer
   b. Key-enter the proper commands to load the program
   c. Key-enter the proper commands to exit the program

7. Given instruction, the student will outline safety considerations for computer hardware, software, and personnel, with a degree of understanding acceptable to the instructor.

   In order to do this, the student must be able to:

   a. Identify computer hardware protective devices
   b. Identify common hazards in the use of diskettes
   c. Identify safety procedures when operating a computer

TOPIC: COMPUTER SOFTWARE AND FIRMWARE

Students will be introduced to the four specific software application programs to be used in the course after a general discussion of the types and purposes of computer software. Students will be introduced to the differences between software and firmware. They should also be exposed to differences among software applications and understand that specific operations may differ from program to program.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

8. Given a microcomputer, a blank diskette, and operating systems software, the student will prepare the diskettes to accept data, with 100 percent accuracy.

   In order to do this, the student must be able to:

   a. Define *operating system*
   b. Define generic operating commands
   c. Identify steps to access the operating system
   d. Key-enter appropriate commands
   e. Follow on-screen instructions

9. Given a microcomputer and a diskette with existing files, the student will make a backup copy and copy specified files to formatted diskettes, with 100 percent accuracy.

   In order to do this, the student must be able to:

   a. Identify steps to access the operating system
   b. Key-enter appropriate commands for making a backup
   c. Key-enter appropriate commands to copy a file
   d. Follow on-screen instructions

10. Given instruction, the student will distinguish among firmware and types of software giving identifiers of each, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify types of operating software
    b. Define computer firmware
    c. Define computer software
    d. Recognize types of applications software

11. Following a demonstration of common applications software programs, the student will describe the typical business uses of each program, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify characteristics of each applications program
    b. Identify limitations of each type of program
    c. List common uses of computers in business
    d. Match appropriate programs to business needs

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

12. Given a business situation involving information needs, the student will identify one use for each type of applications software which might be used to satisfy the situation, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Recognize the business situation
    b. Define applications software
    c. Identify the uses of common business applications software
    d. Identify the uses of specialized office automation applications software
    e. Choose appropriate applications software

TOPIC: COMPUTERS IN BUSINESS: AN INTRODUCTION

Students will understand that the computer is a productivity tool which, when used properly, can aid in decision making. They also will examine considerations in justifying the purchase of a computer system. Although students will become aware of many software applications used in business, the focus of this module is on the many uses of word processing, database, spreadsheet, and graphics software. Students will explore the variety of ways these applications are used in different businesses, and within the same business, to handle diverse situations.

13. Given a product, service, or idea/information-oriented business, the student will identify two potential computerized applications for each of the universal business activities, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Distinguish among product, service, and idea/information businesses
    b. List the universal activities of businesses
    c. Identify ways that computers are used in business
    d. Match an appropriate computer application to a universal business activity

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

14. Given four common software applications, the student will identify a use for each application within each of the three selected business subsystems studied in Business Analysis, with a degree of accuracy and understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List the three selected business subsystems studied in business and marketing education
    b. Identify business uses for common software applications
    c. Match an appropriate application of each to the three selected business subsystems

15. Given a business situation involving the potential purchase of a computer system, the student will justify a purchase or no-purchase decision, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify advantages and disadvantages of computerization
    b. Identify cost considerations
    c. Reach a decision based on the factors presented

SUGGESTED INSTRUCTIONAL STRATEGIES

3. Have students locate a printed illustration or draw a facsimile of each of the two types of computer systems and three types of computers. Then have them label the components and peripheral devices. Additional information should include the function of each system, the features, and power capabilities.

4. Pair students to critique each other in initial operation of the in-house computer system.

5. Have students prepare a bulletin-board-size prompt chart with steps to initiate the operation of the in-house computer system.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

6. Organize the class into groups to produce wall charts that provide reinforcement for students regarding:
   a. Computer hardware protective devices
      -anti-static pads/sprays
      -surge protectors
      -dust covers
      -shields
      -cable/wire *lifters*
   b. Common diskette hazards
      -heat
      -pencil/pen markings
      -magnetic materials
      -fingerprints
      -soda/coffee
      -improper storage
      -horseplay (diskettes as frisbees)
   c. Safety procedures
      -power on/off
      -power plugs
      -foreign materials in disk drives
      -horseplay
      -connecting cables/wires
      -backup copies of data/disks
      -write-protect tabs

7. Demonstrate how to boot the disk operating system. Explain and demonstrate (on a large demo monitor or screen) the procedure or commands necessary to format (initialize) a disk to receive data. Provide each student with a systems disk and an unformatted disk. Have the students boot the system and format their blank disk as you review the procedure a second time on the demo monitor or screen.

8. Demonstrate how to copy a file from an original disk to another (formatted) disk. Have the student copy a file to another disk.

9. Explain the reason for making backup copies of disks and demonstrate the procedure. Have the students make a backup copy of a disk.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

10. Conduct a discussion of the potential advantages of firmware to the user of a computer system. Suggest business situations where firmware might be especially desirable.

11. Assign students to make two lists:

    a. Why some businesses do not use computers
    b. Of those businesses that use computers, identify the benefits

    After review of student lists, present a common list and have students suggest a list of things that computers cannot do in a business setting; i.e., think, feel, care, understand.

12. The first column listed below contains a variety of business information needs. Use the designations "A" through "D" listed below to indicate in the second column one or more types of applications software that would help to meet the identified business information need.

    Application Software: (A) Word processing, (B) Database, (C) Spreadsheet, (D) Graphics

Business Information Needs	**Application Software**
1. Current list of customers	_____
2. Employee wage schedules giving three different proposed wage increases	_____
3. Difference between last year and current year utilities costs	_____
4. List of suppliers	_____
5. Proposed quarterly budget for Department A	_____
6. Budget comparisons by department	_____
7. Inventory summary for the month	_____
8. Balance sheet	_____
9. Sales forecast	_____
10. Updating a sales promotion brochure	_____

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

13. Give students the following list of business enterprises and have them indicate a different use that each enterprise could make of computer technology.

Enterprise	**Computer Application**
1. Advertising agency	_____
2. Automobile manufacturer	_____
3. Bank	_____
4. Corner grocery store	_____
5. Florist shop	_____
6. High school	_____
7. Homemaker	_____
8. Hospital--patient care division	_____
9. Library	_____
10. Police department	_____
11. Stockbroker	_____
12. Television news/weather station	_____
13. Travel agent	_____

14. Listed below in the first column are several business enterprises. In the second column, identify the enterprise as (1) service oriented, (2) product oriented, or (3) idea/information oriented.

Business Enterprise	**Kind of Business**
1. Advertising consultant	_____
2. Automobile dealer	_____
3. Guidance counselor	_____
4. Home package delivery	_____
5. Investment banker/advisor	_____
6. Marriage counselor	_____
7. Newspaper	_____
8. Research laboratory--medicines	_____
9. Shoe store	_____

From the list above, select one enterprise in each of the three categories (service, product, idea/information). For each choice, identify several ways in which the business might employ computer technology to enhance or improve their operations related to one or more of the following universal business activities: production, bridging, external environmental, resource development, and management.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

15. Conduct the following activities individually or in small groups:

    a. Instruct students to write and record on tape a radio script of one or two minutes in length, explaining, in condensed form, the uses of computers in business enterprises. Students may invent a new computer system (name) for a sales pitch at the end of the broadcast.

    OR

    b. Instruct students to write and record on tape a radio script of one or two minutes in length promoting a software application (can be imaginary) directed to one of the three selected business subsystems.

    OR

    c. Instruct students to write and record on tape a radio script of one or two minutes in length promoting specialized office automation software applications.

16. Have students develop a plan to persuade an imaginary business to use computers in its operations. This will require students to explore common software applications including advantages and disadvantages of computerization.

MODULE 3: BUSINESS WORD PROCESSING APPLICATIONS

This module provides students with hands-on computer experience. Students will create, edit, format, and produce hard copy of specific documents while generating many ideas for uses of such a software package. A list of terms is provided at the end of the Content Outine to assist students.

Key Concepts:

- Electronic word/text processing has the ability to increase the efficiency and effectiveness of written communication.
- Word processing software facilitates editing capabilities.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Operational Characteristics	16	17
	A. Operational commands		
	B. Formatting techniques		
	C. Print command		
II.	Applications	17	18
	A. Medium-length business letter	18	19, 20
	B. Interoffice memorandum	19	21, 22
	C. Two-page report	20	23
	D. Outline		

Terminology:

Block
Copy
Delete
Insert
Merge
Move
Search

Estimated teaching time: 3 weeks (9 hours)

MODULE 3: BUSINESS WORD PROCESSING APPLICATIONS

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: OPERATIONAL CHARACTERISTICS

Students will become familiar with the specific operation of the software package to be used. They will manipulate data within a word processing software program. The transferability of the basic commands and formatting techniques may be addressed.

16. Given instruction, the student will demonstrate an understanding of the operational characteristics of a word processing package, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify operational commands of word processing software packages
    b. Describe format procedure
    c. Identify the steps to activate a printer from the word processing software package

TOPIC: APPLICATIONS

It is important for students to view word processing as more than letter writing. Since many workers--in addition to office support personnel--must use word processing to communicate with others, students will recognize that word processing skills are fundamental in the business world. Application to the three areas of accounting, marketing, and administrative services allows for creative uses of word processing beyond the basics of letters and memos.

17. Given instruction, the student will demonstrate an understanding of how word processing can be used to increase productivity in business and industry, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List unique situations where word processing can be used to advantage
    b. List unique business needs that can be met more efficiently by word processing software than by traditional office procedures
    c. Match a unique capability of word processing software to a specific business need

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

18. Given a previously created and stored simple report requiring editing, the student will retrieve the report, make five different editing changes, reformat spacing and margins, and print a hard copy, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify steps to retrieve a stored document
    b. Identify basic editing and reformatting commands
    c. Identify steps to print a document

19. Given instruction on a word processing software package, the student will key an interoffice memorandum, medium-length business letter, and outline from formatted, corrected copy, and print hard copy, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify steps to format the documents
    b. Key-enter the memorandum, medium-length letter, and outline, making all required changes
    c. Identify steps to print the documents

20. Given a previously created and stored two-page report, the student will perform a block operation within a page and a block operation between pages, and print the document, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify steps to retrieve a document
    b. Define *block operation*
    c. Identify steps to perform a block operation
    d. Identify steps to print the document

SUGGESTED INSTRUCTIONAL STRATEGIES

17. Supply students with a list of the basic operating and formatting commands appropriate to the word processing software needed to key-enter a simple paragraph or list. Instruct students to identify each command in their own words. Students will key-enter their definitions and print out a copy.

    Provide students with the teacher version of command definitions on an overhead transparency. Instruct students to make red ink corrections on their individual lists and save for future use.

    (Note: This document is used in Strategy 19.)

18. Invite a speaker from a law office where repetitive documents are produced, a speaker from a publications office where massive editing is performed, and a speaker from a real estate firm where personalized, boilerplate letters are produced to discuss their unique uses of word processing software.

19. Supply students with a list of basic editing commands appropriate to the word processing software being used. Instruct students to identify each command in his or her own words. Students will key-enter their definitions and print out a copy.

    Provide students with the teacher version of command definitions on an overhead transparency. Instruct students to make red ink corrections on their individual lists.

    Retrieve Strategy 17 and Strategy 19 documents, edit the documents, and print. Instruct students to save the printed documents in a folder to use for reference.

20. Secure a book report or other one-page document required by teachers in English or Social Studies and key-enter the report with some errors. Print out a copy and make editing changes on the printout to distribute to students. Have students retrieve a copy of the original document, make editing changes, and print a corrected copy.

21. Coordinate a project with an instructor from another discipline to have students originate an interoffice memorandum, a medium-length letter, and an outline to be key-entered and printed. This might involve an invitation to an outside speaker, a request for information for classroom use, or activities in the school store.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

22. *Piedmont Movie Rentals* operates five stores in New York State. Locations include Albany, Brewster, Brooklyn, Kingston, and Syracuse. Each outlet stocks an inventory of videotapes for customer rental. All customers have paid a membership fee to join the Piedmont Club. Headquarters for the company is 130 Washington Avenue, Albany, NY 12234. Contact with branch offices and stores is maintained through telephone, postal service, and networked computers.

    As the end of the year approaches, headquarters needs information to prepare an annual company report, tax returns, and sales forecasts. The first step in the multi-store, multi-function data gathering plan involves notice to the five outlets.

    Activity #1

    Provide students with the following:

    Date: (Current date)
    To: All employees
    From: J. Piedmont, CEO
    Subject: Year-end Information

    The end of a successful year should be a time for reflection. Therefore, before we prepare the Annual Report, *Piedmont Movie Rentals* is asking for your comments on ways to improve our company and our service to customers. Please reply within seven (7) days.

    Next year's goals will be based on your comments.

    Activity #2

    Have students prepare the following letter, using today's date, to ABC Printing Co., Inc., 1500 Ink Place, Waterford, NY 12188. Dear Ms. Copy: The staff of *Piedmont Movie Rentals* will deliver to you the draft material for the annual report one week from today. (paragraph) As we discussed last week, the Annual Report should be printed and ready for distribution by the end of the month. Mr. Tom Bates will be your contact person if you have any questions about the report. (paragraph) We have enjoyed working with you, and we know we will be proud of the finished document. Sincerely, J. Piedmont, CEO

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

Activity #3

Give students the following outline regarding the plan of action to produce the annual report for *Piedmont Movie Rentals.* Instruct students to format, key-enter, and store the outline.

PIEDMONT MOVIE RENTALS

Annual Report Plan

I. Contact All Employees
   - A. Purpose
   - B. Timelines

II. Collect Financial Information
   - A. Monthly store reports
   - B. Employee survey
   - C. Previous annual reports

III. Analyze Data
   - A. Demographic
     1. Statewide
     2. Location
   - B. Financial

IV. Produce Annual Report
   - A. Central office draft
   - B. Illustrations
   - C. Published document

23. Select a simple, two-page report from a newspaper, magazine, or professional journal that relates to the benefits of occupational education in high school. Key-enter the document with planned changes in mind. Print out a copy, make editing notations and changes, and duplicate hard copies for student use. Produce disk copies of teacher's original, two-page report on students' data disks. Instruct students to plan and execute the changes indicated on the hard copies, indicating what commands were used to execute each change required.

MODULE 4: BUSINESS DATABASE APPLICATIONS

Students will learn that databases are a collection of interrelated data files organized for ease of access, update, and retrieval. After learning the fundamentals of accessing, updating, and retrieving information, the student will recognize the ways in which businesses can use databases. A list of terms is provided at the end of the Content Outline to assist students.

Key Concepts:

- The power of a database is its ability to record, manipulate, select, sort, calculate, and retrieve large amounts of data quickly and easily.
- Data becomes more valuable when it is ordered on the basis of specific criteria.
- It is essential that an organization keep its data current.
- Useful information must be in a form that is easy to update, access, and associate with related data.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Operational Characteristics	21	24-26
	A. Operational commands		
	B. Structuring techniques		
II.	Applications	22	27, 28
	A. Creating a database	23	32
	B. Editing a database	24	29
	C. Searching a database	25	30, 31
		26	30-32
		27	32

Terminology:

Criterion
Descriptor (Item name, field name)
Design/structure
Field
File
Primary sort
Priority
Query
Record
Replicate/copy
Report generator
Search
Secondary sort
Sort

Estimated teaching time: 3 weeks (9 hours)

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: OPERATIONAL CHARACTERISTICS

Students will become familiar with the specific operation of the software to be used. They will manipulate data within a database software program. The transferability of the basic commands and formatting techniques may be addressed.

21. Given instruction, the student will demonstrate an understanding of the operational characteristics of a database software package, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify operational commands in a database software package
    b. Define *structuring/design*
    c. Build a database
    d. Distinguish among types of data (i.e., numeric, character)

TOPIC: APPLICATIONS

Students will be exposed to the power of database programs through interaction with prepared databases. They will then have the opportunity to construct a simple database in order to understand the structure and design involved. Students will make changes in the database and search the database to create unique files for a specified purpose. Students will be exposed to common uses of databases by businesses and understand how various uses would require unique combinations of the database file.

22. Given instruction, the student will demonstrate an understanding of how a database can be used to increase productivity in business and industry, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List unique situations where a database can be used to advantage
    b. List unique business needs that can be accomplished more efficiently by database software than by traditional office procedures
    c. Match a unique capability of database software to a specific business need

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

23. Given identified needs of a business and a database with a description of the fields, the student will determine if the database can be sorted to satisfy the needs, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Understand the identified needs
    b. Identify the ways in which the database can be sorted
    c. Match a specific sorting to the specific need
    d. Determine needs which cannot be met by the structure of the database

24. Given a database software program and information essential to the creation of a database, the student will plan and construct a database from the information, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Key-enter the proper commands to load the database program
    b. Define basic database commands or menus
    c. Differentiate among files, fields, and records
    d. Formulate the database structure
    e. Key-enter information

25. Given a previously created and stored database file and a revised set of data variables, the student will modify the database and generate a specified report, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify the steps to retrieve the database file
    b. List the commands to edit data in the existing database file
    c. List the steps to save the old and/or revised database
    d. Select and sort the database on a field
    e. List the commands to generate a report

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

26. Given a previously created and stored database file and instructions for selecting records, the student will print a copy of the records, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify the steps to retrieve the database file
    b. Identify commands to search and display a record
    c. Identify the steps to print a hard copy of a single record or multiple records

27. Given a previously created and stored database, the student will generate a report that will allow a first-level sort through a numeric requirement, a first-level sort through an alphabetic requirement, and an additional sort to further prioritize the solution, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List the steps to retrieve a stored database
    b. Identify the required priorities for the sort solution
    c. Identify the steps to produce a hard and soft copy of the report

SUGGESTED INSTRUCTIONAL STRATEGIES

24. To help students understand the definition of databases and how common they are in our lives, have them list some frequently used ones such as telephone books, address books, and home inventory files of record, coin, or recipe collections.

25. Develop transparencies from the beginning screens in the database software program being used in building a database. Use to familiarize students with the database software.

26. Using word processing software, instruct students to key-enter:

    a. Definition of database
    b. Definition of operating commands
    c. Definition of structuring/design
    d. Steps for building a database

    Have students add this list to their files.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

27. Invite a school administrator to discuss how a student database can be used for many applications.

28. Invite a speaker from the IRS, motor vehicle office, or law enforcement agency to explain the power and variety of uses of a database.

29. Have students structure a simple database using information they supply about themselves, for example:

    Last name, first name
    Age
    Homeroom number
    Hobby

    Collect the data from each student and supply the composite data to all students. Key-enter the data. (Name the database, Student List and save for future use.)

30. Instruct students to retrieve the database, **Student List.** Provide students with the following changes:

    a. Change the last name of two students.
    b. Change the age of one student.

    Print the revised data alphabetically by *last name* and save the file.

31. Instruct students to retrieve the database, **Student List.**

    a. Have students generate an alphabetical list of all students.
    b. Generate a list of students by homeroom and in alphabetic order.
    c. The teacher may select another category for sorting.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

32. Provide students with the following case problem:

Ace Textbook Company maintains a database of schools in New York State that offer business and marketing education programs and which have purchased Ace textbooks in the past five years. Included in each school record are the following fields:

Field	Descriptor (Item name, field name)
1	School name
2	School address
3	Telephone number
4	County code number
5	Contact person
6	Most recent year of purchase
7	Sales dollars in Year 1
8	Sales dollars in Year 2
9	Sales dollars in Year 3
10	Sales dollars in Year 4
11	Sales dollars in Year 5

How would Ace sort their database if the following situations occurred?

a. The sales manager wants to assign regional salespersons to visit the schools that have not purchased Ace textbooks in the past two years.
b. The Marketing Department plans a statewide mailing to all previous customers.
c. The Marketing Department plans a personally addressed, statewide mailing to all teachers in New York State.
d. The Accounting Department is preparing next year's sales forecast by geographic region.
e. Special announcements are to be sent to schools on Long Island.
f. The Accounting Department wishes to compile a list of sales by county for the last two years.

MODULE 5: BUSINESS SPREADSHEET APPLICATIONS

After initial orientation to the mechanics of operating a specific spreadsheet program, students will be introduced to the use of a spreadsheet for such activities as forecasting and information retrieval. Students will explore how businesses make use of the capabilities of a spreadsheet. They will gain hands-on experience in the creation of simple spreadsheets and the manipulation of more complex, prepared spreadsheets. A list of terms is provided in the Content Outline to assist students.

Key Concepts:

- Electronic spreadsheets allow businesses to do "what-if" projections quickly and easily.
- Electronic spreadsheets permit a business to perform calculations on large amounts of data.
- Electronic spreadsheets facilitate the organization of data in a way that aids in decision making.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Operational Characteristics	28	33, 34
	A. Basic commands		
	B. Formatting techniques		
	C. Print commands		
II.	Applications	29	35-37
	A. Creating a spreadsheet	30	35, 36
	B. Changing a spreadsheet	31	37
		32	38-40
		33	37

Terminology:

Attributes
Cell
Cell address
Column
Format
Formula
Global
Heading
Labels
Range
Row
Title
Value

Estimated teaching time: 3 weeks (9 hours)

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: OPERATIONAL CHARACTERISTICS

Students will become familiar with the specific operation of the software to be used. They will manipulate data within a spreadsheet software program. The transferability of the operating commands and formatting techniques may be addressed.

28. Given instruction, the student will demonstrate an understanding of the operational characteristics of a spreadsheet software package, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify operational commands of a spreadsheet software package
    b. Define *global*
    c. Identify the steps to format a spreadsheet
    d. Identify the steps to activate a printer from the spreadsheet software package

TOPIC: APPLICATIONS

Students will gain hands-on experience in the creation of simple spreadsheets involving labels, values, and formulas. They will have the opportunity to manipulate more complex, prepared spreadsheet documents to expose them to the power and flexibility of the spreadsheet. After the initial mechanics of operation are mastered, students should be introduced to the many ways in which spreadsheets are used in business. Students should learn that the spreadsheet has the flexibility to perform "what if" (forecasting) calculations as well as facilitating complex data reports.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

29. Given instruction, the student will demonstrate an understanding of how electronic spreadsheets can be used to increase productivity in business and industry, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List situations where electronic spreadsheets can be used to advantage
    b. List business needs that can be met more efficiently by electronic spreadsheet software than by traditional procedures
    c. Match a capability of spreadsheet software to a specific business need

30. Given a spreadsheet software program and information to be incorporated in a spreadsheet that will require the use of labels, values, and arithmetic formulas, the student will format the spreadsheet, input values and formulas, and print the spreadsheet, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Key-enter the proper commands to load the spreadsheet program
    b. Identify operating spreadsheet commands, menus, and attributes
    c. Differentiate among functions defined by the specific spreadsheet program
    d. Key-enter alphabetic and numeric data and formulas
    e. Identify the steps to print a spreadsheet document

31. Given a previously prepared and stored spreadsheet and new numerical data and formulas, the student will make changes to the spreadsheet to accommodate the new data and print the spreadsheet, with a degree of accuracy and completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify the steps to retrieve the spreadsheet
    b. Identify basic editing functions
    c. Identify the steps to save and print the spreadsheet

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

32. Given instruction, the student will identify a unique spreadsheet use for businesses involved in the following areas: health care, recreation, retailing, manufacturing, and fast-food, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List business uses for spreadsheets
    b. Identify information needs in health care, recreation, retailing, manufacturing, and fast-food businesses
    c. Match a spreadsheet use to a specific business

33. Given a previously prepared and stored spreadsheet and new numerical data and formulas, the student will generate a forecast solution based upon the stored spreadsheet, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify forecasting commands
    b. Identify steps to construct the forecast solution
    c. Analyze the forecast solution for feasibility
    d. Identify steps to save and print the forecast solution

SUGGESTED INSTRUCTIONAL STRATEGIES

33. Using a word processing program, instruct students to key-enter the definition of *formatting* followed by the steps needed to format a spreadsheet. Next, have them key-enter and define the basic spreadsheet commands of the available software. Save and print a copy for inclusion in student folders.

34. Have students manually construct a sample spreadsheet on multiple column ledger paper with five or six columns and several rows. Use a simple problem; enter amounts and labels. Have students change amounts and move columns.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

35. Provide students with the data that follows. Have them design an electronic spreadsheet; key-enter the titles, labels, formulas, and data; and print the spreadsheet.

SALES RECORD FOR PRODUCT LINES AND SALES STAFF

Name	Fishing	Skiing	Bowling	Total Yearly Sales
Abrams, R.	45,000	120,000	30,000	
Baker, W.	50,000	145,000	25,000	
Carter, D.	30,000	100,000	15,000	
Davis, F.	50,000	80,000	8,000	
Garret, H.	10,000	90,000	9,000	
Howard, A.	15,000	85,000	5,000	
Smith, T.	55,000	75,000	12,000	
Turner, B.	25,000	135,000	10,500	
Warren, B.	5,500	56,000	8,000	
Zeh, R.	13,600	110,500	15,400	
TOTAL				

Based on the results of this spreadsheet, students should answer the following:

1. Which product line is most successful?
2. Which sales staff member should be promoted to district manager based on sales results?
3. What factors should be considered in determining whether or not to eliminate a product line or salesperson?

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

36. Provide students with the data that follows. Have them design a spreadsheet; key-enter the titles, labels, formulas, and data; and print the spreadsheet.

Comparative Income Statement

ABC Clothing

	January	February	Increase or Decrease	Percent of Increase or Decrease
Sales	$100,000	$125,000		
Less: Sales Returns	4,000	2,500		
Net Sales				
Cost of Goods Sold	35,000	37,000		
Gross Profit				
Expenses:				
Salaries	14,000	13,000		
Rent	2,500	2,500		
Utilities	650	750		
Supplies	300	280		
Insurance	350	350		
Miscellaneous	180	195		
Total Expenses				
Net Profit				

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

37. Problem situation:

    a. An initial projection of cash flow by the office staff of the Xenia Business Institute is shown below. Complete the spreadsheet.
    b. When the projection was presented to the school's administration, they determined that monthly expenditures for the teaching staff should be reduced by 5% and that cafeteria revenues should be increased by 10%. Make the corrections.

Projected Cash flow 19-- (in thousands)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
CASH INFLOW													
TUITION	10,141	8,141	5,141	1,500	1,500	1,500	1,500	10,141	8,141	5,141	1,500	1,500	
BOOK SALES	2,322	1,680	1,680	1,680	1,680	1,680	1,680	2,322	1,680	1,680	1,680	1,680	
CAFETERIA REVENUES	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	
ATHLETIC FEES	1,988	2,988	2,988	2,988	2,988			2,988	2,988	2,988	2,988	2,988	
TOTAL CASH IN													
CASH OUTFLOW													
PROFESSIONAL STAFF	8,380	8,380	8,380	8,380	6,380	6,380	6,380	8,380	8,380	8,380	8,380	8,380	
SUPPORT STAFF	2,120	2,120	2,120	2,120	2,120	2,120	2,120	2,120	2,120	2,120	2,120	2,120	
BUILD & EQUIP	1,800	1,800	1,800	1,800	1,800			1,800	1,800	1,800	1,800	1,800	
LIBRARY SUPPORT	300	300	300	300				2,300	2,300	1,300	1,300	1,300	
TOTAL CASH OUT													
WORKING CAPITAL													

38. Using the following classifications, have students identify unique spreadsheet applications that might be used by each:

    Health Care--Hospital, Dentist, Physician
    Recreation--Baseball Park, Bowling Lanes, State Campground
    Manufacturing--Automobiles, Videocassette Recorders, Toys
    Fast Food--Ice Cream Store, Pizza Place, Taco Stand

39. Invite an MIS (Management Information Science) professional or a computer software sales representative to address the class on the uses of spreadsheets appropriate to various types of businesses.

40. Create a bulletin board display of advertisements for electronic spreadsheet packages.

MODULE 6: BUSINESS GRAPHICS APPLICATIONS

Students will review the fundamentals of construction and interpretation of common graphs and charts. They will explore reasons for using graphs and charts as a means of communication. Students will learn how graphics are used in business reports and other correspondence. (Note: Most microcomputers need some sort of graphics package and graphics board in order to use the graphics capabilities of the machine. A dot matrix or laser printer may be required to produce hard copy.) A list of terms is provided at the end of the Content Outline to assist students.

Key Concepts:

- Computer graphics make it possible to make the relationships among data more meaningful by presenting numbers in pictorial form.
- Graphics are used to enhance the presentation of information.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Graphical Representation	34	41, 42
	A. Fundamentals		
	1. Determine appropriate type of graph/chart		
	2. Manual graph/chart construction		
	3. Types of graphs/charts		
	4. Graph/chart interpretation		
	B. Computer graphics		
	1. Operating commands		
	2. Print commands		
II.	Applications	35	43
	A. Print applications	36	44
	1. Line graph/chart		
	2. Bar graph/chart		
	3. Pie graph/chart		
	B. Paint programs		
	1. Design		
	2. Canned		
	3. Create/draw		
	4. Presentation		

MODULE 6: BUSINESS GRAPHICS APPLICATIONS

Terminology:

Axis
Legend
Paint
Pixel
Print
Resolution

Estimated teaching time: 2 weeks (6 hours)

MODULE 6: BUSINESS GRAPHICS APPLICATIONS

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: OPERATIONAL CHARACTERISTICS

Students will study fundamental graph/chart construction and interpretation in preparation for learning the specific operation of the graphics software. They will manipulate data within a graphics software program in order to produce a variety of charts and graphs. The transferability of the basic commands and formatting techniques may be addressed.

34. Given instruction, the student will demonstrate an understanding of manual and computer graphics, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List types of graphs/charts
    b. Identify the fundamentals of graph/chart construction
    c. Prepare data for a chart or graph/chart
    d. Identify basic commands and menus of a graphics software package
    e. Interpret a graph/chart
    f. List the steps to activate a printer from the graphics program

TOPIC: APPLICATIONS

Students will use a business graphics software program to effectively communicate information through graphical representation or a specially designed format to present words, figures, or both.

35. Given a business situation and accompanying data, the student will create a corresponding line chart, bar chart, and pie chart, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify the steps to key-enter the proper commands to load the graphics software package
    b. Choose the appropriate graphic format
    c. Use graphics commands and menus to key-enter the data
    d. Operate specialized commands to save and print the chart

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

36. Given instruction, the student will demonstrate an understanding of how graphics can be used in business and industry, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List situations where graphics can be used to advantage
    b. List capabilities of common graphics applications programs
    c. List unique business needs that can be met more clearly and efficiently by having in-house graphics software
    d. Match a unique capability of graphics software to a specific business need

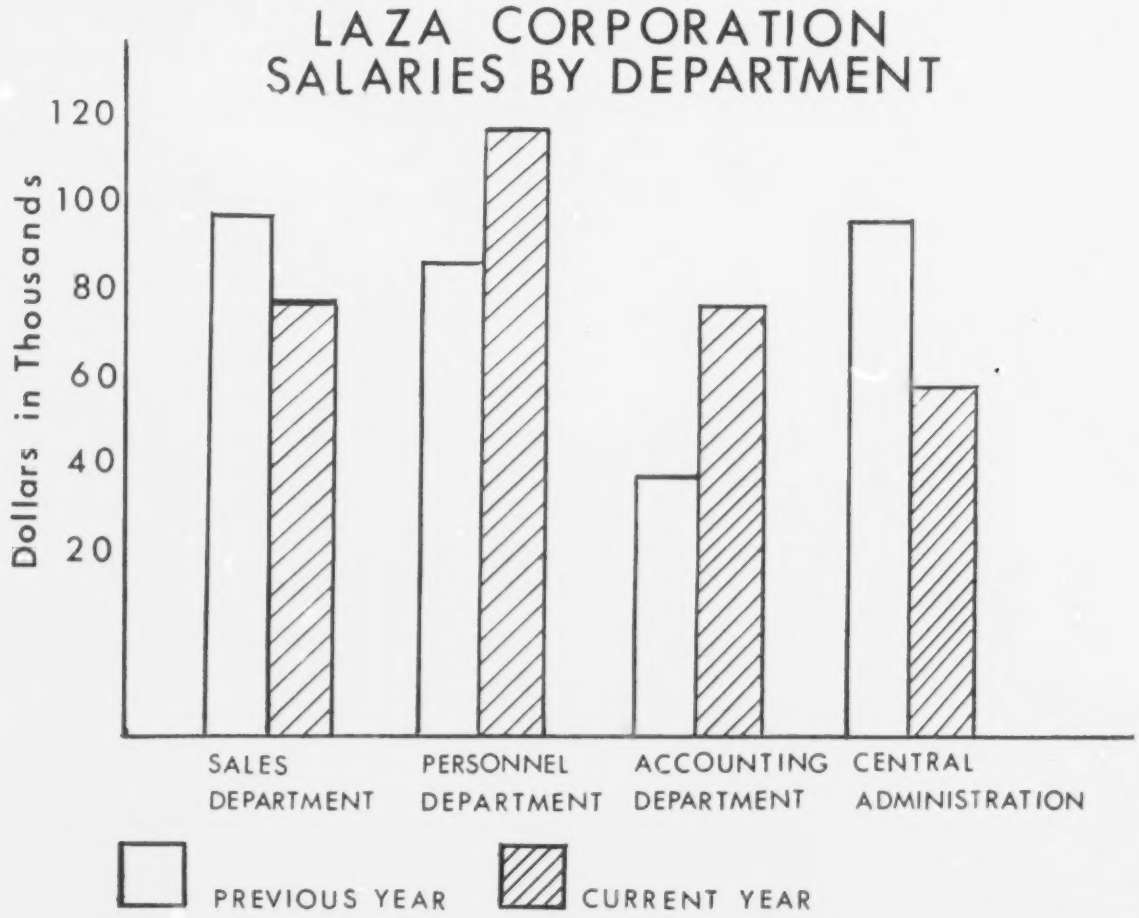
SUGGESTED INSTRUCTIONAL STRATEGIES

41. Using the word processing program, students should prepare the following information for inclusion in their folders:

    a. A list of the major forms of graphs/charts and the identifying characteristics of each
    b. Short explanations of the fundamentals of graph/chart construction
    c. A list of the basic commands and explanations to operate the available graphics software

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

42. Students should review the following graph/chart and answer the related questions.



a. What information does the graph/chart supply?
b. Which department had the greatest percent increase in salaries over the two-year period?
c. Which department is the most efficient?

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

43. Provide students with the following case study:

Piedmont Movie Rentals operates five stores in New York State and wants to prepare a graphical presentation for the annual report on both individual store and total company performance.

Piedmont Movie Rentals

Store Location	Annual Rentals	Average Number of Employees	Number of Units in Stock	Annual Expenses
Kingston	$25,000	1	200	$15,000
Albany	40,000	1	250	17,000
Brooklyn	100,000	3	750	52,000
Syracuse	55,000	2	300	24,000
Brewster	80,000	2	400	49,000

a. Prepare a bar graph/chart showing a comparison of annual rentals and annual expenses for each store.
b. Prepare a pie graph/chart showing the relationship of annual expenses of each store to total expenses.
c. Prepare a line graph/chart showing the comparison of all stores, from lowest to highest average number of units in stock.

44. Prepare a logo letterhead, a newsletter masthead, or a transparency master to be used for a presentation. Discuss the advantages and disadvantages of various types of software suited to the selected design.

MODULE 7: INTERRELATED APPLICATIONS

Students will learn that the information needs of a business often require data from various sources that may be contained in more than one software program. They will learn that businesses use many software programs and when two or more are combined to be used simultaneously, they are called integrated programs. Students will learn that there is more than one way to integrate and will explore the advantages and disadvantages of integrated versus stand-alone programs.

Key Concepts:

- The computer industry is moving toward making it easier to combine software applications.
- Integrated applications software makes it easier to combine forms of presentation.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Integrated Applications	37	45
	A. All-in-one or combination programs	38	46
	B. Series or family of software programs		
	C. Software integrator or special linking program		
II.	Benefits of Integration	38	45, 47
	A. Increased productivity		
	B. Increased accuracy		
	C. Ease of use		

Estimated teaching time: 2 weeks (6 hours)

MODULE 7: INTERRELATED APPLICATIONS

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: INTEGRATED APPLICATIONS

Students will be exposed to the variety of combinations of common software applications. They will explore alternative ways of combining programs and the advantages and disadvantages of each approach.

37. Given a request for a business report and the related information, the student will explain the process of developing the report using an integrated software package, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List the capabilities and limitations of integrated software packages
    b. Plan the report
    c. Identify the appropriate integrated software package(s) to satisfy the request

38. Given instruction, the student will prepare a simple document using three different forms of subject matter presentation, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify types of integrated software
    b. Analyze the document for appropriate types of subject matter presentation
    c. Select appropriate software
    d. Identify the procedure to key-enter the data
    e. Identify the steps to print the document

TOPIC: BENEFITS OF INTEGRATION

Students will become familiar with the convenience of using one software program to perform several tasks. They will be exposed to the ease of using programs which share common menus and common command structures and the advantages of a program which allows transfer between stand-alone programs.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

39. Given a business situation requiring the development of a document involving several forms of subject matter presentation, the student will justify the use of integrated software to prepare the document, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Analyze the forms of subject matter presentation in the document
    b. Differentiate among the integrated applications
    c. Select the appropriate type of integrated application
    d. Identify the benefits of integrated applications

SUGGESTED INSTRUCTIONAL STRATEGIES

45. Obtain samples of reports from businesses or the school administration where content is presented in a variety of formats such as graph/charts, narrative content, financial projections, and membership lists.

    a. Have the students work in groups to identify how they could generate the report with available classroom independent software
    b. Have students research integrated software packages beyond those available to the class and identify how they could generate the report with integrated software.

46. Prepare a simple newsletter using integrated software that gives the student the opportunity to combine various types of subject matter presentation; i.e., text, chart, logo.

47. Have students research through periodical literature for an all-in-one or a combination program and have them identify the features of the program including the program emphasis.

MODULE 8: THE COMPUTER, SOCIETY, AND THE INDIVIDUAL

Students will understand that computer technology is affecting how individuals transact business in the marketplace. This module will provide students with an opportunity to assess the ways in which computer technology affects them today and to explore how it may impact upon their future.

Key Concepts:

- Computer technology has the capability of improving the quality of life.
- Computer technology has a negative side.
- Computer literacy is becoming a universal tool.
- The proliferation of computer technology has raised ethical and legal concerns.

CONTENT OUTLINE

		Performance Objectives	Suggested Instructional Strategies
I.	Computer Technology Impacts	40	48
	A. Positive	41	49, 50, 52
	1. Job enlargement		
	2. Increased productivity		
	3. New job opportunities		
	4. Nature of competition		
	5. Quality of life		
	6. Increased leisure time		
	7. Crime control		
	8. Systems approach to management		
	9. Other		
	B. Negative		
	1. Invasion of privacy		
	2. Job dislocations and potential unemployment		
	3. Computerized crime		
	4. Health concerns		
	5. Other		

CONTENT OUTLINE (Cont'd.)

		Performance Objectives	Suggested Instructional Strategies
	C. Recent innovations		
	1. Computer Assisted Instruction (CAI)		
	2. Electronic funds transfer		
	3. Robots		
	4. Computer Assisted Design (CAD)		
	5. Computer Assisted Manufacturing (CAM)		
	6. Electronic bulletin board		
	7. Computer networking		
	8. Electronic calendaring		
	9. Expert systems		
	10. Automated Teller Machines (ATM)		
	11. Super chips		
	12. Diagnostic testing		
II.	Legal and Ethical Considerations of Computer Technology	42	51, 52
	A. Computer-related ethical and legal issues	43	53, 54
	1. Program abuse		
	2. Use of computer for personal work		
	3. Diverting information to unauthorized persons		
	4. Hardware abuse and theft		
	5. Appropriation of copyrighted software		
	6. Ownership of programs		
	7. Development of derivative hardware or software from patented or copyrighted products		
	B. Remedies for the issues		
	1. Legislation		
	a. Fair Information Practice Acts		
	b. Privacy Act of 1974		
	c. N.Y.S. Computer Tampering Law of 1986		
	d. Federal Computer Fraud Law		
	2. Security system		
	3. Business code of ethics		
	4. Personal moral code		

Estimated teaching time: 2 weeks (6 hours)

MODULE 8: THE COMPUTER, SOCIETY, AND THE INDIVIDUAL

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES

TOPIC: COMPUTER TECHNOLOGY IMPACTS

This module will familiarize students with ways in which computers are affecting the lives of individuals and society at large; both positive and negative impacts will be explored. Students will also become acquainted with some of the most recent achievements in computer science and their potential benefits to humankind.

40. Given instruction, the student will identify two positive and two negative impacts of using computers in each of five specific businesses, with a degree of accuracy acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List positive and negative impacts of computer technology
    b. Relate impacts to each of the specified areas

41. Given instruction, the student will relate the impact of recent innovations in computer technology on five specific businesses, with a degree of completeness acceptable to the instructor.

    In order to do this, the student must be able to:

    a. List recent innovations in computer technology
    b. Explain how this technology is changing the ways in which a business handles a particular activity

TOPIC: LEGAL AND ETHICAL CONSIDERATIONS OF COMPUTER TECHNOLOGY

Students will become familiar with many of the ethical and legal issues associated with the field of computer technology. They will learn about unethical uses of computer systems and steps that federal and state governments are taking to protect the public against the abuse of computerized information.

PERFORMANCE OBJECTIVES/SUPPORTING COMPETENCIES (Cont'd.)

42. Given instruction, the student will demonstrate an understanding of ethical and legal issues associated with computer-related technology, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Differentiate between *ethical* and *legal*
    b. Identify ethical and legal issues related to computer technology
    c. Explain why each is an issue

43. Given instruction, the student will explain ways in which computer-related legal and ethical issues may be resolved, with a degree of understanding acceptable to the instructor.

    In order to do this, the student must be able to:

    a. Identify ethical and legal issues related to computer technology
    b. Explain the concerns of business for these issues
    c. Identify possible remedies

SUGGESTED INSTRUCTIONAL STRATEGIES

48. Brainstorm positive contributions of computers on business and individuals and record responses on an overhead projector. Give students a duplicated chart with the items listed in the Content Outline under "Positive Computer Technology Impacts" and have students categorize the brainstormed responses by item (i.e., job enlargement, increased productivity). Follow the same procedure for negative impacts.

49. Assign each student one of the "Recent Innovations" from the content outline to research and report orally, in writing, or pictorially. Provide extra recognition to students discovering innovations not contained on the list.

50. Brainstorm how computers have altered procedures in hotels. Include such things as electronic door cards which are replacing traditional keys, reservations, automatic billing, video checkout, and electronic message boards via the television.

SUGGESTED INSTRUCTIONAL STRATEGIES (Cont'd.)

51. Give students a worksheet containing hypothetical computer-use situations such as copying unprotected software, using company time and equipment for personal use, unauthorized use of bulletin boards, buying a "clone" computer, merging two programs for use as one application, and erasing or accessing company files. Have them discuss which are ethical, unethical, or illegal and why.

52. Using a modem, if available, demonstrate how to access a local bulletin board and download a program. Discuss ethical considerations of using materials found within the system.

53. Demonstrate the use of passwords and codes to protect data in a file.

54. Set up a bulletin board of articles from newspapers and magazines which depict computer-related legal and ethical issues.

GLOSSARY

Applications software - computer programs designed to accomplish a specific task or solve a specific problem

Automatic teller machines (ATM) - computerized devices that provide an individual with many banking and financial institution services

Bridging activities - transactions which link an organization to customers and suppliers

Business enterprise - any business undertaken to provide a product, service, or idea/information in exchange for a payment of some form

Business transaction - an exchange of either a product, service, or idea/information between individuals

Capital - Any man-made instrument of production including tools, machines and factories; money used to buy the instruments of production

Career lattice - a range of jobs within a career cluster in which an individual can move either vertically or horizontally

Career mobility - the ability to move horizontally or vertically to meet career objectives

Central processing unit (CPU) - the part of a computer that interprets instructions, handles the controls, and organizes the input (raw data) into a final form (information or output)

Channel alternatives - the direction or route a product, service, or idea/information takes

Commands - words, abbreviated words, or instructional keys that cause a computer to perform a function or an operation

Competition - the efforts of two or more business firms trying to sell to the same consumer

Computer-aided design (CAD) - design of products through the use of computers

Computer-aided manufacturing (CAM) - control of the manufacturing process through the use of computers

Computer-assisted instruction (CAI) - facilitation of the learning process through the use of computers

Computer networking - the linking of cooperating computers for the purpose of communication and/or the sharing of common data, text files, and peripherals

Controls - the standards set by an organization to monitor performance

Cooperative - a business organized, owned, and operated for the benefit of its members

Corporation - an artificial, legal entity created by law

Creation of wealth - the ability to buy, sell, produce, or manage materials, services, or ideas/information that have value to someone else

Database - a collection of data available to a computer system from secondary storage media

Data processing - the process of converting raw data into information

Demographics - the statistical study of human populations; i.e., growth, jobs, geographic location, age

Desktop publishing - combining of text and graphics to create newsletters, brochures, letterheads, books, catalogs, and a variety of other professional-looking documents

Distribution enterprises - businesses created for the principal purpose of moving goods, services, and ideas/information from the point of production to the point of sale

Dvorak keyboard - a keyboard invented by August Dvorak designed to reduce fatigue, cut down on errors, and increase typing productivity

Electronic bulletin board - messages sent over telephone lines between communicating computers

Electronic calendaring - a computerized method of making appointments, reserving office resources, and updating and modifying calendar events via communicating computers

Electronic Funds Transfer (EFT) - the transfer of money electronically through the use of computers and data communications systems from one bank account to another

Electronic spreadsheet - an electronic worksheet made up of columns and rows of data allowing for fast manipulation of data

Electronic word processing - the manipulation of text using computer hardware and software

Expert system - a computer system that simulates human brain power

External environmental activities - activities that may affect a business operation outside the general production or distribution of that product; i.e., government controls, waste management, and air pollution

Feedback - a process used to monitor and evaluate system output

Field - a group of related characters within computer storage

GLOSSARY (Cont'd.)

File - a group of related records within computer storage

Financing - securing funds for production, distribution, or sale of a product, service, or idea/information

Firmware - a type of computer software permanently installed in the hardware

Floppy disk (diskette) - flexible, magnetic media used as secondary storage on microcomputers; common sizes--8 inch, 5 1/4 inch, and 3 1/2 inch

Forecasting - the ability to predict an outcome based on data analysis; i.e., projections of future business conditions as well as social, economic, and political forces

Form utility - a physical change in a resource to achieve increased value

Format - the physical layout of a document; i.e., margins, spacing, indentions, and centering

Formatting - (1) preparing a disk to receive data; (2) preparing a document by making proper adjustments to the system to achieve the desired arrangement of text

Franchise - the exclusive right to provide specific products, services, or ideas/information within a specified area

Functional organization - one in which departments are organized around specialized tasks; i.e., one accounting department, one production department, and one marketing department

Generalist - one who is prepared to handle many facets of a working situation

Global marketing - marketing over a wide area, frequently on an international basis

Graphics - presentation of data or information through the use of shapes, lines, text, or colors

Hardware - the mechanical and electronic devices of a computer system

Information - organized data

Information age - an information-based era brought about by the advent of computer technology and improvement in communications

Information processing - manipulation of text and data into a meaningful form

Information processing cycle - the activities involved with input, processing, output, distribution/transmission, and storage/retrieval of data

Input - (1) the process of providing data to a computer or to a system; (2) the data that are entered into a computer

Input devices - mechanical or electronic units used to enter data into a computer

GLOSSARY (Cont'd.)

Integrated software package - software that combines several different applications into one program

Job enlargement - the process of widening the scope of an individual worker's job responsibilities to provide greater interest, motivation, and involvement

Leadership styles - interpersonal influence through which individuals supervise, motivate, and direct others toward the achievement of organizational goals; i.e., autocratic, participative, and laissez-faire

Limited partnership - a form of partnership where one or more of the partners has limited liability for partnership obligations while at least one partner has unlimited liability

Line organization - each person has direct authority over the person(s) below him or her in the organizational structure

Line-and-staff organization - a type of organization where specialists perform an advisory role to the line organization

Mainframe computer - a powerful computer with multiusers, many terminals, and large memory capacity

Marketing - coordinated system of business activities designed to provide products, services, and ideas/information to satisfy the wants and needs of consumers

Market channel - a route products, services, or ideas/information follow to reach the end-user

Marketing mix - the systematic use of product development, pricing, placement, and promotion to sell to the ultimate consumer

Matrix organization - a combination of product and functional organization where an individual may report to both a functional supervisor and a product manager

Menus - lists of instructions that appear on a computer screen to assist the user when running a software program

Microcomputer - a small, powerful computer system, usually fitting on a desk top

Minicomputer - a computer more powerful than a microcomputer that can accommodate several users, has greater storage capacity, and may be linked to several external devices; distinctions between a microcomputer and a minicomputer are becoming blurred

Network - an interconnection of computer systems, terminals, and communications facilities

Operating system - software routines that monitor and operate computer hardware to facilitate its use

GLOSSARY (Cont'd.)

Optical disk - a secondary storage medium of enormous storage capacity which is written and read by a laser beam

Output - (1) the actual results of a system, desired or undesired, expected or unexpected (2) the results of processing on the computer; i.e., screen characters, printed copy, microfilm, and music

Output device - a unit on which a computer presents its results; i.e., printer, video screen

Partnership - a form of business owned and operated by two or more people under a contractual agreement

Peripheral devices - input, output, or secondary storage devices on-line to the CPU

Place utility - value added when products, services, or ideas/information are available where they are wanted and needed by the end-consumer

Possession utility - the ability to create value added to products, services, ideas/information through ownership

Product organization - where departments are organized around product lines; i.e., an accounting department for each product line, a production department for each product line, and a marketing department for each product line

Production activities - the processes associated with the design and physical preparation or manufacture of a product, service, or idea/information

Production enterprises - businesses engaged in the physical preparation of goods either on an extractive or a manufacturing level

Productivity - a measure of efficiency; the amount of work a person is able to complete in a given period of time; the value of output per worker

Proprietorship - a business owned by one person

Quality of life - value assigned by individuals or groups of individuals to factors affecting their everyday existence; i.e., opportunities for fulfilling employment and favorable working conditions; cultural, recreational, and educational opportunities; and satisfying living conditions

Record - a group of related fields within computer storage

Resource development - the activities pursued for improving the potential of an organization; i.e., motivation, work standards, and quality standards

Risk - the potential for loss

Robot - a reprogrammable, multifunctional device designed to move materials, assemble parts, and perform specialized tasks

GLOSSARY (Cont'd.)

Secondary storage devices - mechanisms to supplement the storage capacity of a computer

Secondary storage media - magnetic tape, magnetic disks, and optical disks for storing data outside the primary computer memory

Societal needs - the wants and needs of a large segment of the population essential to their general welfare

Stand-alone software - software dedicated to one specific type of application

Stand-alone system - a computer system that does not require connection to another computer

Structuring - the process of arranging data for a database

Subsystem - a secondary, subordinate part of a larger system

System - any set of components or organizational rules that work together to achieve a desired result

Systems model - an example of how specific items or components interact to achieve a desired result

Service enterprises - businesses developed to meet individual or societal needs for other than tangible products

Specialist - an individual trained to provide a specific service or perform a particular task

Time utility - value added when products, services, or ideas/information are available when they are wanted and needed by the end-consumer

Technology - (1) the application of accumulated human knowledge to the transformation of resources through the use of tools for the purpose of meeting human needs and solving problems; (2) all the ways that human beings extend their capabilities to meet their wants and needs to solve problems

Universal activities - the interrelated components (subsystems) of a business organization

Utility - value added to a product, service, or idea/information between input and output

Winchester disk - a type of hard or fixed disk for secondary storage

Word processing - a total system of personnel, procedures, and equipment designed to handle business communications efficiently and economically